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# USSR Report

MILITARY AFFAIRS

MILITARY HISTORY JOURNAL

No 5, MAY 1986

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7 NOVEMBER 1986

# USSR REPORT

## MILITARY AFFAIRS

### MILITARY HISTORY JOURNAL

No 5, May 1986

Except where indicated otherwise in the table of contents the following is a complete translation of the Russian-language monthly journal VOYENNO-ISTORICHESKIY ZHURNAL.

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## 27TH CPSU CONGRESS AND TASKS OF MILITARY HISTORY SCIENCE

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 5, May 86 (signed to press 21 Apr 86) pp 3-9

[Editorial published under the rubric "The Decisions of the 27th CPSU Congress in Life"]

[Text] The 27th CPSU Congress has armed the communists and all the Soviet people with an action program permeated with a spirit of the highest social optimism. The Political Report of the CPSU Central Committee to the 27th Congress which was given by the General Secretary of the Party Central Committee, Comrade M. S. Gorbachev, the new wording of the CPSU Program and the Basic Directions for USSR Economic and Social Development for 1986-1990 and for the Long Run Up to the Year 2000 have posed for the party and the people qualitatively new tasks of advancing socialism and moving Soviet society closer to communism.

In carrying out the national economic, ideological-indoctrinational and defense tasks, a major role has been assigned to science. "Party policy in the scientific area, "states the new version of the CPSU Program, "is aimed at establishing favorable conditions for dynamic progress in all areas of knowledge, at concentrating personnel, material and financial resources in the most promising areas with the task of accelerating the achievement of the designated economic and social goals, the cultural development of society and ensure dependable national defense capability."(1)

The Congress provided an objective estimate of the labor of Soviet scientists who have made a worthy contribution to the nation's socioeconomic development and the cause of increasing its defense might. The Congress pointed to the successes achieved in recent years by Soviet social scientists. At the same time, the Political Report of the CPSU Central Committee to the Party Congress stated that the nation has the right to expect discoveries and inventions which will bring about truly revolutionary changes in the development of technology and production methods, major philosophical generalizations, sound economic and social forecasts and profound historical research. The Congress demanded that the scientists decisively overcome the divorcing of science from the questions of life and actively and boldly introduce its achievements into

practice. Scholasticism and dogmatism were decisively condemned as these lead to stagnation of thought, divorce science from life and impede its development.

This applies also fully to military history science which must more actively investigate the life of the Armed Forces and consistently and purposefully participate in the actual carrying out of diverse defense tasks. By its research in the area of the history of wars, the armed forces and military art it must disclose the patterns and trends in the development of military affairs, enrich military theory and help it and military practice in successfully carrying out the tasks confronting them. As was pointed out at the Congress, "the times have raised the question of the broad reaching by social sciences of the specific needs of practice...."(2) Only on the basis of a thorough analysis of the events of the past and present is it possible to establish the dialectic succession in military affairs, to creatively improve this and raise it to a qualitatively new, higher level.

Military history science accumulates, investigates, preserves and hands on like a baton the very rich experience and makes it possible to extract instructive lessons from the past. Its importance consists in the focus of military historical research on studying and generalizing social and military experience proceeding from the demands of today. An analysis of historical phenomena helps to seek out additional ways for practically solving current problems.

Of course, the present cannot be a copy of the past. In comparison with the period of the Great Patriotic War, the Soviet Armed Forces have in many ways become different and have qualitatively altered their combat potential. Soviet military theoretical thought has risen to a higher level. However, here many principles in the organizational development of the Army and Navy and military art which we have been guided by in the past are still viable now. The creative analysis of them considering the fundamental changes in military affairs brings indisputable benefit to troop training practices.

The social role of Soviet military history science during all the stages of its development was primarily in that it was and presently remains an important source in shaping the communist ideology of the men of the Army and Navy and all the Soviet people. Military historians must, as can be seen from the decisions of the 27th Party Congress, in conducting intense research work, provide the Soviet people with the richest historical material. This will make it possible to more profoundly understand where lies the strength of the socialist social and state system and to be certain of its superiority over the bourgeois one.

As is known, the ideological and methodological role of military history science is effective only under the condition that the events of the historical past are correlated in the research to the present and future. Here lies the importance of the words of V. I. Lenin: "...I have looked into the past only from the viewpoint of what will be needed tomorrow and the day after tomorrow for our policy."(3) The dialecticalness of this Leninist notion is in the importance of not any "timely" subjects of the past with which scientists at times are "infatuated," but rather all aspects of

historical past. In terms of military history science, of great importance is the research on all component parts of military history. From the viewpoint of the demands of today it may seem that the military historical phenomena which presently seem "distant" tomorrow may be exceptionally pertinent. It should be pointed out that in the past there are no eras, processes, phenomena, events or facts which are of little or no interest.

In military history research it is very important to consider that political indoctrination and ideological work is one of the inseparable component parts of the nation's defense might and the combat readiness of the Armed Forces. As was pointed out in the documents of the 27th CPSU Congress, this work must indoctrinate the Soviet people and the younger generation in a spirit of loyalty to the Communist Party, high ideological conviction, organization and discipline, and a readiness to carry out one's military duty under the most difficult conditions. Military historians should make a major contribution to disclosing the heroics of our people in defending the fatherland and the Soviet military in carrying out their international duty. By their research they must indoctrinate the Soviet people in the revolutionary, military and labor traditions since these embody the best moral-political qualities of the people and the men of the Army and Navy. The historical material for this work is truly inexhaustible.

During the years of the Great Patriotic War "indoctrinating history" withstood a harsh testing. The Soviet people during the most difficult time of the war against the Nazi invaders maintained a profound conviction in the rectitude of the sacred struggle and a belief in the wisdom of the Communist Party's political leadership. Their consciousness and practical deeds showed a profound merging of public and personal interests. Purposefulness, steadfastness and courage were the standard of conduct of the soldiers and sailors, the sergeants and petty officers, the officers, generals and admirals. In the defensive and offensive battles many Soviet soldiers sacrificed themselves. History knows also that the heroic feats carried out during the years of the Great Patriotic War have been repeated by many Soviet soldiers in carrying out their patriotic and international duty during the postwar years.

Heroism and the steadfastness of the Soviet people have always been and will be worthy of profound respect. It is very important that this theme find a place in the military history works and in the social research. The heroic pages of history should fire the souls of our contemporaries and call them to carry out a feat for the sake of defending the socialist fatherland.

One of the central questions of military history science is studying the experience of the Communist Party in the area of the organizational development of the Armed Forces and the organizing of the armed defense of the motherland.

The program provision concerning party leadership of military organizational development and the Armed Forces obliges military history science to more profoundly study and generalize the experience of the organizing and directing influence of the CPSU on the life and activities of the Army and Navy under present-day conditions and to more clearly disclose the revolutionary



succession and consistency of this influence. Further research is required on the historical aspects of party leadership over military organizational development in the postwar period.

The military historians are confronted with a task of enormous importance, that is, to thoroughly disclose the activities of the CPSU and the Soviet state to establish the military potential of the Soviet Armed Forces in the prewar year and its development and strengthening in the present-day period. Here it is essential to consider that the defense and combat potentials are dynamic and complex and they must be examined considering the human factor, the relationship of all the elements and in their dynamics.

A primary task of military history science is to investigate the experience of the wars of the present era, primarily wars in defense of the socialist fatherland. Here it is important to bring out the factors, sources and lessons of the wars initiated by imperialism and to show the historic significance of the struggle of progressive forces against the forces of reaction and aggression and the struggle of peoples against the military threat.

Military history science should make its contribution to carrying out the task of increasing the vigilance and readiness of the Armed Forces to thwart the intrigues of imperialism against the USSR and its allies and to defeat an aggressor. The Soviet Union has repeatedly been the victim of treacherous imperialist aggression. For this reason, for our Armed Forces high combat readiness is both history and modern times and for Soviet military history science, a most pressing subject of research.

The military historians in close alliance with the researchers working in the military political and military theoretical areas must also make a contribution to studying various aspects of imperialism's preparations for a new world war as well as aggressive local wars.

Much remains to be done by them also in the area of investigating the history of the development of Soviet military theoretical thought. This research should help to elaborate scientifically sound modern military theoretical views and concepts. From the experience of history it is essential to show the importance of the conformity of developing military theoretical thought to the tasks of the actual training and preparation of the Armed Forces personnel and improving the organizational structure of the troops and the organization of command and control.

One of the important tasks confronting the military historians continues to be a profound and complete elucidation of the role of the masses of people in a war. Seemingly, numerous military history publications have devoted a sufficient place to this fundamental problem. However works are still encountered the authors of which limit themselves to merely a statement of the democratic nature of wars in defense of the socialist fatherland and cite individual historical facts and numerical data which often move from one work to another on manifestations of collective and individual heroism.

The Marxist-Leninist general sociological concept of the crucial role of the masses of people in history has been and remains an unshakable basis for a scientific approach to the given problem. History, in the expression of K. Marx and F. Engels, is not any "particular individual," it "does not do anything," "it does not possess any vast wealth" and "does not fight in any battles..." "no not 'history' but namely man, the actual living man — this is who does everything, possesses everything and fights for everything." (4) The value of history lies precisely in the activities of the masses of people, in their initiative, energy and revolutionary creativity. This thesis was reflected in the documents and materials of the 27th Party Congress. "The CPSU," states the new version of the Party Program, "proceeds from the Marxist-Leninist thesis that the people are the creator of history and that the creation of communism is a matter of their hands, their energy and their reason." (5)

It is important that the historians disclose military life more widely and more justly. The heroic deeds of the elder generation should inspire the young soldiers to self-sacrifice and noble deeds. There remains the urgent task of showing the role of individual outstanding personalities in military history in an historical and methodologically correct manner.

In disclosing the decisive role of the Soviet people in the wars for the defense of the socialist motherland, it is essential to bear in mind that mass heroism in fighting and at work has been shown by Soviet people of different nationalities. The friendship of the Soviet peoples has always been one of the important sources of victory over the enemy. All of this contributes to a profound realization that under present-day conditions, as in the past, the defense of the socialist fatherland is the sacred duty of each Soviet person, regardless of his nationality.

A particular feature in the defense of socialism against imperialist encroachments under present-day conditions is also that this is carried out by the common efforts of the peoples and the armies of the friendly socialist states. As long as the imperialist military NATO bloc exists, the CPSU feels it essential to assist in every possible way in improving the activities of the Warsaw Pact as an instrument of collective defense and joint struggle for a lasting peace. Soviet military historians, in working in close collaboration with the military historians of the socialist commonwealth countries, must investigate the military history aspects of the defense alliance of the fraternal peoples more broadly and profoundly.

In the future, military history science should also examine the experience of the numerous local wars started by imperialism against the individual socialist countries and national liberation movements. This experience is important in the fact that it reflects certain ideas of imperialist strategy, of the forms and methods for initiating and waging wars, the actual carrying out of military preparations and employing various models of modern weapons. Military historians possess great opportunities to show in detail and on the basis of documentary data the responsibility of the United States and the other NATO countries for the unchecked arms race, the desire to extend it into space, for preparing for Star Wars and the policy of brinkmanship.

Along with disclosing the sociopolitical aspects of wars, the historians have great work to do in investigating the history of military art. In parallel with fundamental research, Soviet military history science must focus efforts on elaborating those problems of the history of military art which are of pertinent applied significance. One of the specific tasks in this regard is the publishing of a series of works which show the development of Soviet military art in preparing and conducting combat operations during the major operations and battles of the Great Patriotic War. The works being written should help to broaden the operational-tactical viewpoint of the military personnel as much as possible, help them in more profoundly understanding the development patterns of the theory and methods of armed combat and teach them to have a creative approach to solving the problems of strategy, operational art and tactics considering present-day demands.

On the basis of a careful study and generalization of the experience of the commanders, staffs and political bodies during the prewar years and in the period of the Great Patriotic War, it is advisable to prepare for publication books, pamphlets, aids and articles on the work methods of the commanders and staffs in the area of the command and control of the formations, units and subunits in preparing and conducting combat operations. More profound research is needed on the history of the development of military equipment as this will help to increase the military-technical training of the preinduction youth as well as the Army and Navy personnel.

It is essential to continue research in the area of the methodology of military history. As was pointed out in the new version of the CPSU Program, "the dialectical materialistic methodology has been and remains the fundamental, tested basis of natural scientific and social cognition. It must be further developed creatively and skillfully employed in research work and in social practice."(6)

Of major importance for military history science and for all history science as a whole is the principle of the unity of communist party loyalty and scientific objectivity, assuming a clarity of the Marxist-Leninist ideology and methodological discipline in studying the past. The most important manifestation of this principle in science is a decisive defense of the truth, the inadmissibility of subjectivity and the inacceptability of any distortions of military history. Alien to Marxist historians are both an embellishment as well as a blackening of the past, including military.

Unfortunately, individual military history works are of a mere descriptive nature. In some of them the factual aspect prevails over the theoretical. The attempts to avoid certain acute military history problems does not correspond and cannot correspond to the spirit of party loyalty and scientific objectivity.

Of urgent importance is an integrated, comprehensive approach to solving problems in military history research. This means that research on the history of wars should contain both a military technical as well as a military political analysis. Such an approach presupposes the disclosure in any war of the relationship of armed combat to the economic, ideological and diplomatic struggle of the states and coalitions of states. The practical importance of

this is that it makes it possible to draw from the past not individual examples taken from the flow of interrelated events but rather view the events and processes in one or another war in their aggregate.

We should particularly stop on the question of memoir literature. The reader is greatly interested in publications of this sort. They play both a cognitive and indoctrinational role. The memoirs of not only the military leaders but also the middle- and junior-level commanders and the rank-and-file soldiers who fought their way through the war help to disclose the democratic nature of the wars in the defense of the socialist fatherland. A just and moving description of what the soldier saw and how he fought against the enemy is always interesting and instructive. There is also a need for memoirs by rear workers including industrial workers, kolkhoz members, representatives of the intelligentsia, the party, soviet and public bodies and organizations who made a worthy contribution to our victory in the Great Patriotic War.

One of the urgent tasks in military history science remains the unmasking of the bourgeois and revisionistic falsifications of military history. This work must be carried out more aggressively, effectively and from clear class positions. In our hands is the sharpest weapon, the truth of history which is inherent to our science.

A good deal of experience has been gained in this area. Much has been done, for example, to unmask the falsifiers of the history of World War II and the Great Patriotic War, to disclose the reasons of their occurrence and the persons guilty of starting them, to show the crucial role of the Soviet Union and its Armed Forces in defeating Naziism and Japanese militarism, to bring out the sources and factors of the great victory, the advantages of Soviet military science and military art and the liberating mission of the Soviet Army and Navy. Subsequently, we must further unmask falsifications of the history of Soviet military organizational development.

The need to raise military history research to a higher level requires attention to a number of other important questions. One of these is the question of the personnel of military history science. Soviet military historiography possesses a large detachment of highly skilled specialists. However, it must be added that in the future young, promising personnel will be working and gaining experience hand in hand with the experienced and well-known military historians who are representatives of the elder generation of military history science. The party teaches us to solve personnel questions in being guided by Lenin's principles of selecting and evaluating scientific workers according to their political, professional and moral qualities. Practice has shown that the need has arisen for broadening the special training of the military history personnel in advanced training courses and graduate programs for military historians.

Also very pertinent is the question of broadening the source base for military history research.

In the interests of correctly choosing the directions of military history research and increasing its effectiveness in solving the urgent tasks of strengthening the nation's defense capability and defending the victories of

socialism, it is important to have a coordinating and pooling of efforts by the military history scientific collectives, the staffs and political bodies, the commanders and political workers as well as the appropriate civilian scientific institutions. In this regard we have much to do. A series of fundamental, multivolume works has been the work of coordinating the reciprocal efforts of not only Soviet researchers but also the scientific collectives of friendly socialist states. This experience merits further development.

An important condition for increasing the practical importance of military history research is not only its high scientific level but also its active popularizing. We have in mind the publishing of scientific popular literature, the preparing of military history references and survey forecasts, the holding of scientific practical conferences and seminars jointly with Army and Navy representatives, the propagandizing of military history knowledge by the means of movies, radio and television, the giving of lectures and the providing of scientific procedural aid to the military institutions of learning and to the cultural and educational facilities of the Armed Forces. Military historians should remember how great is the demand for the materials of their research and be concerned that the printed military history works be worthy of a broad range of readers. More must be done to follow public opinion concerning the publications on military history, show attention to critical comments and proposals from the readers and consider these in further work.

\* \* \*

The decisions of the 27th CPSU Congress have armed the Soviet military historians with an effective ideological and methodological weapon and a knowledge of those primary and long-range tasks which must be carried out. In being guided by the party's demands on science, the military historians must improve the quality, effectiveness and practical importance of their research and make a worthy contribution to carrying out the decisions of the 27th CPSU Congress.

#### FOOTNOTES

1. "Programma KPSS: Novaya redaktsiya" [CPSU Program: New Version], Moscow, Politizdat, 1986, p 57.
2. M. S. Gorbachev, "Politicheskiy doklad Tsentralnogo Komiteta KPSS XXVII syezdu Kommunisticheskoy partii Sovetskogo Soyuza" [Political Report of the CPSU Central Committee to the 27th CPSU Congress], Moscow, Politizdat, 1986, p 108.
3. V. I. Lenin, PSS [Complete Collected Works], Vol 38, p 136.

4. K. Marx and F. Engels, "Soch." [Works], Vol 2, p 102.
5. "Programma KPSS...", p 78.
6. Ibid., p 57.

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## DEVELOPMENT OF SOVIET MILITARY ART IN OPERATIONS OF 1944-1945

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[Article by Doctor of Historical Sciences, Professor, Lt Gen V. A. Matsulenko, published under the rubric "Soviet Military Art"]

[Text] During the third period of the Great Patriotic War (January 1944-May 1945), Soviet military art developed in a better situation than in 1941-1943. The fire and strike power of the Soviet Armed Forces had risen significantly. The level of strategic leadership was higher and the command personnel had gained rich experience and firm skills in troop command in a difficult situation. The Soviet Army, in dealing a crushing defeat to the main groupings of Nazi troops in the operations of the second period of the war (November 1942-December 1943), firmly held strategic initiative.

At the same time, our troops continued to be opposed by the main Wehrmacht forces which numbered around 5 million men, 54,600 guns and mortars, 5,400 tanks and assault guns and over 3,000 aircraft.(1) On the most important sectors, the enemy went over to a fixed positional, deeply echeloned defense employing favorable natural lines. All of this complicated the preparation and execution of the operations and created significant difficulties for troop combat.

The greatest contribution to Soviet military art was made in the area of the offensive which was the main type of military actions of the Soviet Armed Forces.

The strategic offensive by the Soviet Army in the campaigns of 1944 and 1945 was conducted on a front with a total length from 2,100 to 4,500 km. This involved simultaneously from 9 to 11 fronts which were supported by the Air Forces, Navy, the National Air Defense Troops and the partisans. The 1945 campaign in Europe was the largest in terms of the number of men and weapons. Involved in it were some 6.7 million men, 107,300 guns and mortars, 12,100 tanks and SAU [self-propelled artillery mount] and 14,700 aircraft. The depth of advance by the troops reached 800 km.(2)

The increased troop capability and the acquired combat experience made it possible to conduct a strategic offensive by successive and simultaneous



strategic operations involving groups of fronts along the entire Soviet-German Front. This was a new achievement for Soviet military art. Thus, in the 1944 campaign the most characteristic were strategic operations conducted successively on different axes. The operations on the new axes usually started at a time when operations on other axes were still continuing. Thus, gradually the offensive actions encompassed the entire strategic front. This confused the enemy and deprived it of the possibility to determine from whence the next attack could be expected. The enemy was forced to split its forces and could not initiate major countermeasures in order to check our offensive.

In the 1945 campaign in Europe, Soviet military art underwent further development. The strategic offensive on a larger part of the Soviet-German Front was carried out in the form of simultaneous strategic offensive operations. For example, in January 1945, on a 1,500-km front, from the Baltic to the Carpathians, the enemy was dealt a crushing blow by the forces of six fronts simultaneously and as a result of this its large groupings were defeated in East Prussia, Poland and the Western Carpathians. The Nazi Command was forced to halt the offensive of its troops in the Ardennes and begin the shifting of large forces to the Soviet-German Front. "It is impossible to describe all that occurred between the Vistula and the Oder in the first months of 1945," wrote the former general of the Nazi Army, F. Mellentin. "Europe has known nothing of this sort since the times of the fall of the Roman Empire."(3)

The campaigns of the third period of the war were also characterized by the broader conducting of successive offensive strategic operations along the front and in depth without operational pauses between them. In the summer and autumn of 1944, after the Iasi-Kishinev Operation operations were carried out to liberate Romania and Bulgaria and then the Belgrad and Budapest Operations. The total depth of advance by our troops was 1,100 km. In the winter and spring of 1945, after the crushing strike in East Prussia, Poland and Czechoslovakia there followed the Berlin and Prague Operations.

The strategic offensive operations themselves assumed greater scope. They were conducted along a front from 400 to 1,000 km and to a depth of 300-600 km. For example, the Belorussian Operation was carried out in an area of 1,100 km to a depth of 550-600 km. Larger enemy groupings were defeated. While around 50 enemy divisions were routed in the counteroffensive at Stalingrad, the figure was 68 in the Belorussian Operation and 90 in the Berlin.

The scope of the front and army offensive operations constantly increased. While in the Iasi-Kishinev Operation the depth of the offensive by the Second Ukrainian Front was 250 km and in the Vistula-Oder of the First Belorussian Front some 500 km, in the Khingan-Mukden Operation of the Transbaykal Front, this reached 800 km. Correspondingly the average daily rate of advance increased: from 25 km a day (Iasi-Kishinev, Vistula-Oder) to 38-80 and for the mobile formations, from 40 to 90 km a day (Khingian-Mukden). The high rates of advance ensured the achieving of the goals of the operation within a short period of time and thwarted the enemy's attempts to hold our troops on intermediate lines.



On a front scale there also were numerous instructive operations many of which developed successively to a great depth. Thus, in the Belorussian Strategic Operation, the Third Belorussian Front conducted three operations of successive depth: the Vitebsk, Vilnius and Kaunas. A characteristic feature of them was that they were carried out without operational pauses. The planning and preparation of the subsequent operations were carried out, as a rule, in the course of the preceding ones.

The major encirclement operations were the highest achievement of Soviet military art. While in 1941-1943, these were an infrequent phenomenon, in 1944-1945, they became typical of Soviet Army actions. These were the Korsun-Shevchenkivskiy, Belorussian, Iasi-Kishinev, Budapest, Berlin, Prague and Manchurian Operations. In them the questions of forming the internal and external perimeters of encirclement were resolved in a very unique manner. In the operations of 1944-1945, most often one portion of the Soviet troops advanced rapidly in depth, while the other at the same time engaged the groupings to be surrounded frontally. As a result the time was substantially shortened for eliminating the surrounded enemy. For example, at Stalingrad, this required 2.5 months, at Korsun-Shevchenkivskiy some 17 days, in Belorussia 6-11 days, at Kishinev 7-8 days and in the Berlin Operation 7 days.

A new feature in the third period of the war was the surrounding of a large enemy grouping in the course of pursuit at a depth of over 200 km from the forward edge (Belorussian Operation) and the surrounding and simultaneous splitting of the surrounded enemy into parts (Berlin Operation).

In the course of preparing and conducting the campaigns of 1944 and 1945, the problem of selecting the axis for the main thrust was more successfully resolved. During the 1944 summer-autumn campaign and the 1945 campaign in Europe, the Soviet Armed Forces launched the main thrust at the center of the Soviet-German Front successively on the Minsk, Warsaw and Berlin axes where it was possible by the shortest route to reach the vitally important areas of Nazi Germany. The crushing of the main Wehrmacht groupings on these axes ensured the rapid liberation of Belorussia and Poland and then led to the unconditional surrender of Nazi Germany.

During the third period of the war, the principle of massing men and weapons on the main axes underwent further development. In the summer 1944 strategic offensive of the Soviet Army, for example, more than 50 percent of the personnel, 53 percent of the guns and mortars, around 56 percent of the aircraft and over 58 percent of the tanks and SAU were concentrated on a front which comprised 37 percent of the total length of the Soviet-German Front. (4) This made it possible in the campaigns of 1944 and 1945 to establish stronger strategic troop groupings on the most important axes with these groupings consisting of 140-190 divisions, 28,000-42,000 guns and mortars, 2,000-6,000 tanks and SAU and 3,000-7,000 aircraft. (5)

The problem of massing men and weapons on the operational scale was also successfully solved. In the operations of 1944-1945, on breakthrough sectors comprising 10-15 percent of the zone of advance of a front there often were concentrated up to 50 percent and more of the rifle formations, 50-80 percent of the artillery, over 80 percent of the tanks and almost all of the aviation.

This made it possible to achieve high densities of men and weapons: up to 250-300 guns and mortars per kilometer of front, 25-30 and more tanks and SAU and considering the mobile groups, up to 80 armor units per kilometer of front, while during the offensive operations of 1941-1942, the densities did not exceed 20-80 guns and mortars and 3-12 tanks and SAU.(6) The high degree of massing men and weapons was one of the most important factors in successfully breaching the enemy defenses and developing the offensive at a rapid pace and to a great depth.

The operational configuration of the troops continued to improve. During the third period of the war, with the going over of the enemy to a deep positional defense as well as resulting from the further increase in the effective strength of our troops, stronger second echelons began to be organized ahead of time in the armies (one or two rifle corps) and in the fronts (one or two combined-arms armies). Certain armies in the operations of 1944-1945 had an operational configuration of three echelons (the 57th Army in the Iasi-Kishinev Operation). The total depth of the front's operational configuration reached 70-100 km and for an army 30 km.

Troop leadership in the concluding stage of the war underwent further improvement. Hq SHC [Headquarters Supreme High Command] in 1944 used its representatives significantly more widely and they not only supervised the carrying out of Headquarters directives and coordinated the actions of the fronts but also in a number of instances provided direct leadership over the operations of the fronts and groups of fronts. For example, MSUs G. K. Zhukov and A. M. Vasilevskiy in the Berlin Operation. In the 1945 campaign in Europe, due to the sharp reduction of the front line, the fewer number of active fronts as well as the accumulating of rich experience in troop command on the operational level, the need for Headquarters representatives was eliminated. Headquarters began to provide leadership over the strategic operations directly through the front commanders. On 30 July 1945, considering the great remoteness of the Far Eastern theater, its enormous territory and complex military-political situation, by a decision of Hq SHC, the High Command of Soviet Troops in the Far East was established. This provided an opportunity to effectively carry out Headquarters instructions, to consider all changes in the operational-strategic and military-political situation and respond promptly to them as well as provide the necessary aid to the fronts on the spot.

Command and control on the operational level were also improved. A characteristic feature of the organizing of control posts was the bringing of them as close as possible to the troops. While during the operations of the first period of the war, the command posts of the fronts were located 50-70 km from the forward edge and observation posts were 3-7 km away, in the third period they were located, respectively, 25-40 and 2-3 km. The army command posts were located 8-12 km from the troop contact line and the observation posts were 2 km. This ensured closer contact of senior chiefs with subordinate ones and convenience and continuity of troop command, as it provided an opportunity for the commander personally to observe the battlefield on the sector of the main thrust, to direct fire damage to the enemy and the breakthrough of its main defensive zone, to promptly commit mobile groups to battle and support their fighting. The continuity of troop

command was also largely ensured by the fact that the command posts were shifted more precisely and in an organized manner, with permission of the superior chief and only after communications were ready in the new position.

The art of organizing and maintaining cooperation of the men and weapons in the operations increased. Regardless of the enormous scope of the strategic offensive in 1944, the 10 consecutive strategic operations conducted on the Soviet-German Front were linked by a common goal and a single plan. A vivid example of the clear organization of cooperation between the groups of fronts in terms of aim, goals and time would be the Belorussian Operation and the operations of the Leningrad, the Second and Third Baltic and the First Ukrainian Fronts in the summer of 1944. Also instructive is the Berlin Operation which was based upon close coordination of the Second and First Belorussian and the First Ukrainian Fronts as well as the Baltic Fleet and long-range aviation. The offensive operations conducted in Czechoslovakia and Austria at the same time tied down the enemy forces in these areas and prevented the Nazi Command from providing help to the Berlin grouping.

In such operations as the Belorussian, Vistula-Oder, Berlin, Prague and a number of others, the principles were established for cooperation with armies of countries which presently make up the Warsaw Pact. The troops of the allied armies fought in operational terms under the Soviet fronts and armies. For coordinating the fighting, Soviet officers with the necessary communications and translators were temporarily assigned to the staffs of the field forces, formations and individual units of the allied armies. At the same time, the officers and generals of the allied armies with communications were stationed at the staffs of the Soviet troops. This ensured continuous operational leadership over the troops and a uniform understanding of the procedure for carrying out combat missions.(7)

During the third period of the war, the further improving of measures to achieve strategic and operational surprise was a substantial contribution to the development of Soviet military art. Characteristic traits were the significant scope and great diversity, including: the establishing of false troop groupings; the conducting of reconnaissance in force prior to an offensive along a broad front and simultaneously in the zones of several fronts; active air operations both on the main and auxiliary axes; the going over of the troops to the offensive initially on the auxiliary sector; the massed employment of smokescreens; the stricter camouflage discipline and rigid control over its observance. The Belorussian Operation was one of the vivid examples of achieving strategic surprise. In preparing for it, Headquarters on 29 May 1944 sent to the first Baltic, the First, Second and Third Belorussian Fronts a directive which demanded that the appearance of preparations for the defensive be created and for this three defensive lines at a depth of up to 40 km be established with the population points being fortified. In order to confuse the Nazi Command on the axis of the main thrust of the Soviet troops in the summer of 1944, the Third Ukrainian Front upon instructions from Headquarters carried out a false concentration of 10 rifle divisions to the north of Kishinev.(8) These and other measures for camouflage and deceiving the enemy ensured the surprise of the Belorussian Operation. The Nazi Command was convinced that the main thrust would be launched in the south and not in Belorussia. For this reason of the 34 tank

and motorized divisions existing on the Soviet-German Front, 24 of them continued to remain south of Polesye. (9)

During the third period of the war, the scale of the preparation and employment of strategic reserves was broadened. By the start of 1945, in the reserve of Headquarters, were the headquarters of 2 fronts, 4 combined-arms armies and 2 air armies, 4 tank and mechanized corps as well as 20 rifle divisions and other formations and units. The reserves numbered 501,000 men, 6,883 guns and mortars, 520 tanks and SAU and 464 combat aircraft. (10)

A most important principle in the employment of the reserves as before was their centralized and massed use on the major strategic axes. Thus, in preparing for the operations of the 1944 summer-autumn campaign, for establishing offensive groupings as part of the operational fronts, a total of 8 combined-arms armies, 2 tank armies and 2 air armies were provided. (11)

In contrast to 1941-1943, during the third period of the war new reserve fronts and armies were not organized. The reserves were replaced by withdrawing armies and corps from those fronts which had completed operations or could complete them with smaller forces. For example, in the concluding stage of the Nikopol-Krivoy Rog Operation the 3d Guards Army was transferred to the Headquarters reserves and upon the end of the Bereznegovato-Snigirev Operation, so was the 28th Army. Subsequently, these armies were transferred, respectively, to the First Ukrainian and First Belorussian Fronts.

Along with the broad employment of strategic reserves, Headquarters in the operations of 1944-1945 carried out larger troop regroupings than in the preceding periods and achieved great art in this. For example, the victory of the Soviet Army on the Right Bank Ukraine in January-April 1944 to a significant degree was brought about by the skillful maneuvering of tank armies and large formations of artillery and aviation. In the Baltic Operation, in the zone of the first Baltic Front during the period from 24 September through 4 October 1944, four combined-armies and one tank army, several formations and a large amount of artillery and other reinforcements were regrouped from the Riga to the Memel axis over a distance of from 60 to 200 km without the enemy being aware of this. This made it possible by a surprise strike from the Shyauliyay area to break through the enemy defenses and reach the Baltic Sea in the Memel area and thereby cut off the entire Baltic grouping of Nazi troops from East Prussia.

A major regrouping was carried out in the Second Belorussian Front on the eve of the Berlin Operation. Its main forces were turned 180 degrees and over a period of 6-9 days were relocated by a combined method (by rail, motor transport and foot) over a distance of 250-300 km. "This was a complicated maneuver for the troops of an entire front," recalled MSU K. K. Rokossovskiy, "and nothing similar to this was carried out during the entire Great Patriotic War." (12)

During the third period of the war, much that was new was incorporated in solving such a complex problem of operational art and tactics as the breakthrough of a deliberate enemy defense. The echeloning of men and weapons assumed a more complete form. On the fronts and in the armies, powerful

assault groupings were established and this ensured decisive supremacy over the enemy on the breakthrough sectors: by 3-5-fold for infantry, by 6-8-fold for artillery and 3-5-fold for aviation. The quantitative and qualitative growth of artillery and aviation made it possible to a significant degree to increase the effectiveness of fire damage to the enemy. In creating artillery softening up, there was a sharp rise in the proportional weight of the artillery strike. The depth of neutralizing the enemy defenses in the course of artillery softening up increased up to 8-10 km. From the summer of 1944 (the First Belorussian Front, Belorussian Operation) a double rolling barrage began to be employed to a depth of up to 2 km.

The close support tank groups from mid-1944 in a number of instances began to be established also in the second echelons of the divisions and this provided an opportunity to increase the efforts of the tanks and SAU in combat in depth.

The correct choice of the axis of the main thrust, the maximum massing of men and weapons on narrower breakthrough sectors than in the previous periods, the simultaneous neutralization of enemy defenses to a great depth by the artillery and aviation, the skillful and more effective employment of all branches of troops ensured, as a rule, the successful breakthrough of the enemy's tactical defensive zone and the rapid development of the offensive in the operational depth. In a majority of the front and army operations during the third period of the war, the main defensive zone was breached on the first day and the entire tactical zone by the middle of the second day of the offensive. Sometimes the tactical defensive zone was breached also on the first day (Third Belorussian Front in the Belorussian Operation and the Second Ukrainian Front in the Iasi-Kishinev Operation).

The massed employment of powerful formations and field forces of armored and mechanized troops played a crucial role in exploiting the success of an offensive to a great depth. In 1944-1945, the fronts had not one but rather two and even three tank armies (First and Second Ukrainian Fronts in the Uman-Botosani Operation and the Proskurovo-Chernovtsy Operation in liberating the Right Bank Ukraine). The tank armies as mobile groups of the fronts were committed to battle, as a rule, after completing the breakthrough of the enemy's tactical defensive zone (5th Guards Tank Army in the Belorussian Operation, 6th Tank Army in the Iasi-Kishinev and the 1st Guards Tank Army and the 2d Guards Tank Army in the Vistula-Oder Operation). In certain operations (on the Right Bank Ukraine, Debrecen, Budapest and Manchurian) where the enemy defenses were weak, particularly in antitank terms, the tank armies were employed in the first echelon of the fronts' operational configuration. Under those specific conditions, this was completely justified as this contributed to the rapid breakthrough of the enemy defenses and the successful carrying out of the front's tasks in the operational depth.

In the final stage of the war, the troops of the fronts pursued the enemy at a faster pace. While during the first period of the war, the rate of pursuit averaged 10-15 km a day, in the second 15-20 km in the third it reached 30-35 km and in the mobile troops 60-80 km a day. In pursuit the crucial role was played by the tank armies, the tank and mechanized corps as well as the larger forward detachments.



During the offensive operations of the third period of the war, brilliant results were achieved in the crossing of major water obstacles without a halt and along a broad front. The Dniester, Vistula and Oder were crossed in this manner. Regulation engineer crossing equipment was employed on a significantly greater scale and this was moved up to the river ahead of time with the forward units. Of great importance for the successful crossing of the water obstacles without a halt was the careful organizing of the crossing, the decisive actions of the forward detachments, the rapid increasing of effort in the struggle to hold and widen the bridgeheads on the opposite bank. The bridgeheads captured on the major rivers during the final stages of operations were employed, as a rule, for concentrating men and weapons in the aim of conducting the subsequent operations.

In 1944-1945, the Soviet troops employed nighttime fighting more widely. For example, in the Berlin and Manchurian Operations for the first time rifle formations advanced at night on a frontal scale. In the Berlin Operation a night attack by units and formations from the First Belorussian Front was supported by 140 searchlights which illuminated the terrain and objects of attack as well as blinded the enemy. Sometimes the success of nighttime fighting was exploited by committing the mobile groups of armies to battle (the mobile group of the 8th Guards Army in the Bereznegovato-Snigirev Operation). Night actions assumed a wider scale, particularly in 1945, in pursuing the retreating enemy with the crossing of water obstacles.

The final campaigns of the war provided rich and instructive experience for offensive actions in the Arctic, in desert areas and in mountain tayga terrain as well as the storming of fortified areas and major population points (Budapest, Königsberg, Berlin and others). Under these conditions the outflanking and shock detachments and groups were a major element in the battle formations of the units and formations.

In the campaigns of 1944 and 1945, the Soviet troops gained definite experience in organizing and conducting an operational defense, although this held an insignificant place in the general course of hostilities during this period. The troops went over to the operational defensive usually after the conclusion of the operations, for supporting the flanks of the assault groupings, for retaining captured lines as well as for repelling enemy counterstrikes and a counteroffensive (the Third Ukrainian Front in the area of Lake Balaton). In all instances this was of a temporary nature but was marked by great tenacity, stubbornness and high activity of the troops. Even the massed employment of large tank groupings supported by aviation did not help the Nazi troops as our defenses were not breached a single time. For example, in the Balaton Defensive Operation during 10 days of fighting they were able to drive just 8-30 km into the defenses of the Third Ukrainian Front.

The defensive by formations during the third period of the war was organized, as a rule, in a short period of time and in a majority of instances under the conditions of direct contact with the enemy and sometimes in the course of repelling strikes by superior enemy forces. For example, the first echelon formations had less than a day to organize the repelling of a counterstrike by

Nazi troops at Budapest. A stable defense was achieved by the hitting of the enemy with artillery fire, by air strikes and the stubborn holding of the occupied lines. Due to the fact that tanks were the main force of the enemy counterstrike groupings, the rapid organizing of antitank defenses assumed even greater significance. During the operations of 1945, this was based upon strong antitank strongpoints and antitank areas which were echeloned in depth, artillery antitank reserves, mobile obstacle construction detachments as well as minefields and other man-made obstacles.

Thus, during the third period of the war the main achievement of Soviet military art was a further resolution of the major problems involved in the preparation and conduct of offensive actions leading to the final and complete defeat of the Nazi bloc.

A profound study of Soviet military art during the concluding campaigns of the Great Patriotic War will help to further develop military theoretical thought and to carry out the tasks of the combat and political training of the troops under present-day conditions.

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3. F. W. Mellentin, "Tankovyye srazheniya 1939-1945" [Tank Battles of 1939-1945], Moscow, Izd-vo IL, 1957, p 280.
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9. "Istoriya vtoroy mirovoy voyny...", Vol 9, 1978, p 47.
10. Ibid., Vol 10, 1979, p 37.

11. VOYENNO-ISTORICHESKIY ZHURNAL, No 7, 1985, pp 66-67.

12. "Istoriya vtoroy mirovoy voyny...", Vol 10, p 322.

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## ORGANIZING OF OFFENSIVE OPERATIONS

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 5, May 86 (signed to press 21 Apr 86) pp 18-21

[From a report by the Commander of the Maritime Military District, MSU K. A. Meretskov, at a district military scientific conference held on 23 November 1946]

[Text] In November 1946, a military scientific conference was held in the Maritime Military District to generalize the experience of the Great Patriotic War. From the combat experience of the Volkhov, Karelian and First Far Eastern Fronts, a study was made of the questions of the planning, organization, support and conduct of front and army offensive operations.

The conference heard reports by generals and officers of the district staff, the chiefs of the branches of troops and services. The Commander of the Maritime Military District, MSU K. A. Meretskov, gave the concluding speech.

Below we give an abridged text of his report on the work of a front commander in preparing an offensive operation.

\* \* \*

In the elaboration of a plan for the next strategic operation by the General Staff, the commanders of the fronts, as a rule, were provided with information on the nature of the forthcoming actions of the fronts. Subsequently, proceeding from the overall strategic concept, the Supreme Commander-in-Chief personally or through the General Staff set the tasks for the fronts and constantly kept the commanders informed on the general situation.

On the basis of the received instructions, the commander of a front was always to be ready to make a proposal on the front's pending offensive operation. Usually after a commander of a front reported that he was ready to make a proposal for his front, he was summoned by the Supreme Commander-in-Chief for a personal briefing. Having listened to him, the Supreme Commander-in-Chief issued instructions to the commander of the front. There were instances when the proposals for the offensive made by the commanders of fronts for various reasons did not correspond to the general situation, for example, there were not enough men and weapons to support the operation or the proposed axis of

the main thrust did not correspond to the overall strategic plan. In accord with the received instructions, the commander of the front worked out new proposals. In the event that the proposals were recognized as correct, the Supreme Commander-in-Chief gave the aim of the operation, determined the main axis of the front's offensive and allocated the necessary men and weapons.

The commander of the front, on the basis of the instructions received by him personally, worked out a detailed plan for the front offensive operation. Often this work was carried out within the walls of the General Staff without leaving Moscow. The commanders of the fronts for this work brought in individual generals and staff officers and commanders of the branches of troops and sometimes, if the situation so required, carried out additional reconnaissance. In this instance, the commanders returned to their staffs and there worked out in detail a plan for the forthcoming operation.

The plan of the operation was worked out in approximately the following sequence:

- 1) The general situation was clarified and a brief conclusion drawn on the state of the enemy and our own troops;
- 2) The goal of the operation was determined as well as the overall task of the front and the axis of the main thrust and stages of the operation;
- 3) The cooperation procedure was established with the other fronts;
- 4) The necessary troop grouping was established for carrying out the set mission;
- 5) The breakthrough front was set and the forces allocated for carrying out this mission as well as the operational configuration of the front's troops;
- 6) The axis of the main thrust and the stages of the operations were determined for each army, the operational configuration of the armies and the battle orders of the corps;
- 7) The procedure was established for supporting the breakthrough with artillery, aviation and engineer troops;
- 8) The procedure was determined for committing the second echelons and mobile groups for developing the breakthrough;
- 9) The procedure was designated for logistic support;
- 10) A scheme was worked out for command and control of the troops in the offensive operation;
- 11) The time was set for the start of the operation;
- 12) A calculation was made for the time and depth of the tasks during each stage of the operation.

All of this was set out in a written report and depicted on maps with all calculations, including for logistic support. Upon completing this work the commander of the front directly or through the General Staff reported to Headquarters that they were ready to provide a briefing on the offensive operation of the front.

The commander of the front was again summoned to Moscow where the Supreme Commander-in-Chief went through all details of the plan for the offensive operation, often right down to the battle formations of the shock groups, companies and battalions. If the need arose, the corresponding adjustments were incorporated in the plan, it was set and the date of readiness was set.

Upon return from Hq SHC with the approved plan, the commander of the front who had previously called in the army commanders solely to work out individual questions, went through with them all the work related to planning the operation in the same order as had been done by the Supreme Commander-in-Chief with the front commanders, that is, he gave specific instructions to the army commanders and determined for each army, the following: the overall mission; the axis of the main thrust; the men and weapons; the stages of the operation; the operational configuration of the troops; the procedure of logistic support.

Then the commander of the front issued instructions on the procedure for cooperation both within the army and with the forces to be assigned for supporting the army operation, he set the date the army was to be ready for the offensive, the date of each stage of the operation and demanded that the army commanders with small groups of generals and officers work out this plan within the front staff.

After reviewing the plans submitted by the front commander, the army commanders received a written directive with the appending of a map and only after this left for the army to organize the carrying out of the approved plan of the operation.

The front command during this period focused its efforts on concentrating the troops, forces and equipment assigned to the appropriate armies for carrying out the operations. Additional reconnaissance was carried out in the field and in the course of this the tasks were adjusted for the armies, corps and divisions.

In exercising supervision over the course of preparations for the operation, the command of the front, from the experience of the Karelian, Volkhov and First Far Eastern Fronts, went down to the battalion level.

After the report from the front commander that they were fully ready for the operation, the Supreme Commander-in-Chief designated the day of the offensive.

In the course of the operation new missions were set for the fronts either by written directives or over the high-frequency telephone, if the situation demanded the immediate adopting of another plan. If the situation permitted, the front commander was summoned to Moscow and sometimes, also, the chief of staff of the front.

The experience of the work of the front commander with the staff and the commanders of the branches of troops. In daily activities the commanders of the fronts and armies, their staffs and the commanders of the branches of troops constantly studied the enemy and had an accurate knowledge of the position of their troops and their logistic support. Here the commander of the front received data on the enemy from troop, agent and air reconnaissance. He had aerial photographs and photographic mosaics of the enemy's defenses. Moreover, the commander of the front received intelligence data from the General Staff.

The aggregate of all intelligence data and the constant study of the enemy provided an opportunity for the commander of the front to draw tentative conclusions on the actions of the opposing troops, their position and state. A knowledge of the enemy, the field, the position, state and supply situation of his troops provided an opportunity for the commander of the front to be ready to always take the necessary decisions and make proposals to the Supreme Commander-in-Chief on the offensive operation.

The commander of a front was constantly informed on all matters by the chief of staff of the front and sometimes the chief of the operations directorate. With them he discussed individual provisions of the operation's plan and set assignments for preparing the necessary materials and instructions on the preparation of the initial position for the troop offensive. Often together with them the commander of a front was involved in studying the enemy, he analyzed the available intelligence data and sometimes requested from the chiefs of staff and the operations directorate their views on organizing the offensive operation.

In order to better understand the position and situation, the commander of the front together with the chief of staff and the commanders of the branches of troops and sometimes bringing in the army commanders, on the maps played through possible variations of the offensive operations in the zone of the front. The army commanders in turn carried out the same work with the staffs and the commanders of the branches of troops for their own armies.

From the experience of a number of operations, the work of the commander of a front with the commanders and chiefs of the branches of troops was organized approximately according to the following scheme. Each day the commander of a front demanded from them detailed reports on the position of the enemy as well as the position and state of the subordinate troops; he received information on what had been done by the commanders and chiefs of the branches of troops over the previous day and what was their plan for further work; together with them he studied the enemy; he learned from them whether the subordinate troops were prepared for the forthcoming combat.

Such daily work with the commanders of the branches of troops made it possible for the commander of a front to always be up on the situation, to know the nature of the activities of the branches of troops and to promptly and specifically focus the troops on carrying out the pending missions.

During the period of preparing for an offensive operation, more profound work was carried out with the commanders and chiefs of the branches of troops and this was done approximately in the following order. On the basis of the available intelligence data concerning the enemy and the tasks of the operation, the artillery commander prepared a briefing report essential for adopting a decision for employing the artillery in the forthcoming operation. The briefing report provided the following information: the composition of the artillery, its grouping by sectors; the missions of the artillery by periods of combat; the fire plan during the artillery softening up and the methods of supporting the infantry and tanks during the attack and while fighting in depth; the organization of command and control; ammunition consumption by stages of the operation, by periods and days of fighting; the composition and tasks of the artillery to support the committing of the second echelons and mobile groups to battle; the composition and tasks of the artillery assigned for antitank reserves; the procedure for the cooperation of artillery with the other branches of troops and the reassigning of it in the course of combat.

On the basis of the briefing report and the general situation, the commander of the front adopted the plan to employ the artillery in the operation. This basically came down to approving and making the necessary adjustments in the report of the front's artillery commander.

The front's artillery commander drew up this plan in the corresponding documents and then began to organize the work with the troops. The plan of the artillery offensive was the leading document in planning the artillery offensive.

When the question arose of the procedure for cooperation between the artillery and other branches of troops and the methods of supporting the infantry and tanks, the commander of the air army, the commander of the armored and mechanized troops and the chief of the engineer troops were also involved in the work.

While working with the commander of the air army, the air tasks were set according to stages of combat, according to goals and time, and the mission was set for the ground attack and bomber aviation to strike the first trench. The questions of the cooperation of aviation with the other branches of troops were clarified and above all with the artillery. In the same manner, work was carried out with the commander of the armored and mechanized troops, the chief of the engineer troops and the other chiefs of the branches of troops.

When all the work had been completed, the commanders (chiefs) of the branches of troops of the front departed for the armies as thoroughly briefed assistant commanders of the front for organizing the offensive operation.(1)

FOOTNOTE

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 16a, inv. 2744, file 76/4.

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EXPERIENCE OF ARMY COMMANDERS, STAFFS IN ORGANIZING, MAINTAINING COOPERATION  
IN OFFENSIVE OPERATIONS OF GREAT PATRIOTIC WAR

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21 Apr 86) pp 22-28

[Article by Doctor of Historical Sciences, Professor, Col R. M. Portugalskiy]

[Text] Among the numerous problems of military art, the question of achieving troop actions which are coordinated in terms of goals, tasks, place, time and methods of carrying out the missions in the interests of defeating the opposing enemy holds a central place. In the search for an effective solution to this, the experience gained during the years of the Great Patriotic War can provide substantial aid.

The first offensive operations conducted by the Soviet Army in the 1941 summer-autumn campaign had to be prepared by the army commanders and staffs in a difficult situation. Most often there was less than a day to organize the combat. Communications equipment was in short supply. The combat experience of the command personnel was insufficient. All of this had a substantial influence on the activities of the command bodies. "Cooperation among the branches of troops was organized hurriedly...without considering the terrain conditions and their influence on the employment of the branches of troops in combat," emphasized the Directive of Hq SHC in September 1941.(1) Other documents pointed out that the command personnel and the combined-arms staffs had little knowledge of the capabilities of the branches of troops, the principles of their combat employment, they limited themselves to coordinating the efforts and issuing general instructions solely for the period of the attack on the forward edge of the enemy defenses and poorly supervised the carrying out of the planned measures. Attention was also drawn to the fact that the missions for the tank troops, aviation and artillery were not given specifically, without considering the targets, the staffs did not provide the troops with the necessary documents for cooperation and rarely provided effective help to subordinates.(2)

The combat experience generalized in the guidance documents and their demands on the personnel played an important role in improving the organization of cooperation in the offensive operations during the 1941-1942 winter campaign. Thus, in preparing the counteroffensive at Moscow, the commander of the 10th Army, Lt Gen F. I. Golikov, having 14-16 hours to organize the offensive,

chose the method of parallel work. Having studied the received mission, he immediately issued preliminary orders which served as the basis for the work of the army staff as well as the commanders of the formations and their staffs. After the adopting of the plan, the commander gave the formation commanders their combat missions and determined the procedure for cooperation in moving up to the attack line, during the first day of the offensive and to the depth of the immediate task. The army staff worked out and issued to the formation staffs procedure charts for cooperation, target designation and mutual identification of the ground troops and aviation. The questions of cooperation with the I Guards Cavalry Corps, the 3d and 61st Armies were coordinated by liaison officers sent out to their staffs with copies of the combat order. In the course of the offensive, the practice of the systematic exchange of information through the staff officers which were constantly in the first echelon divisions helped to maintain cooperation. The calling in of aviation and the coordinating of its actions with the ground troops were carried out through the Air Forces representative of the front.(3)

From the autumn of 1942 cooperation was organized and maintained under somewhat different conditions. The fire and strike capability of the formations and field forces had risen. More mobile troops and aviation began to be involved in the fighting. From 2 to 15 days were allocated to prepare for an operation. In truth, the combat missions became more complex. The 5th Tank Army in preparing for the counteroffensive at Stalingrad, for example, received the mission of advancing in the first echelon of the Southwestern Front on the axis of the main thrust. In having the strength of two tank corps, a cavalry corps and six rifle divisions, during the first 4 days it was to breach the enemy defenses and by the end of the third day create an interior perimeter of encirclement at a depth of 140 km and an external perimeter along the Chir River, while cooperating simultaneously with the 21st Army, with a portion of the forces to participate in defeating the Raspopinskiy enemy grouping.

Having studied the received task and assessed the situation, the army commander, Lt Gen P. L. Romanenko, on 4 November adopted a plan which, without disclosing the overall concept of the front operation, he issued to the formation commanders at his command post. Then he also defined the principles for cooperation (who would coordinate actions in the operation in carrying out which missions, with whom and when). Over the 2 following days, the commander and staff concentrated their efforts on organizing cooperation in the troops which had the mission of establishing the internal and external perimeters of encirclement, as well as coordinating the artillery fire and air strikes with the actions of the first echelon rifle divisions in breaking through the enemy's tactical defensive zone. In reconnaissances conducted in the area of the 47th Guards and the 119th Rifle Divisions, they worked through the questions of taking up the initial position for the offensive by the rifle units, the firing positions by the artillery, the moving up of the close support tanks to the forming-up area and their actions during the period of the artillery softening up, with the start of the attack and in the fight for the first position.(4) With the commanders of the tank corps the army commander worked out cooperation on a map in the form of playing through different variations of actions to the entire depth of the operation, starting with the moving up to the forming-up area. At the command post of the VIII



Cavalry Corps, he issued instructions to coordinate the actions of the formations and units of the latter with the 14th Guards Rifle Division and the 8th Motorcycle Regiment before reaching the line of the Chir River.

From 7 November, the work of organizing cooperation was carried out by the commanders of the corps, divisions and regiments chiefly in the field. During this time, in carrying out the task of supervising and aiding subordinates along with other questions, the commander and staff officers were present at command-staff exercises in the tank corps and in the reconnaissances carried out by the commanders of the 47th and 14th Guards Rifle Divisions. The staff conducted an inspection of the carrying out by the regimental commanders of the demonstration exercises planned by them in the field on the method of organizing cooperation as well as working out the combat planning tables in the first echelon rifle divisions. (5)

Thus, in preparing for the counteroffensive at Stalingrad, the questions of cooperation were worked out successively on the different command-staff levels with the participation of the commander (commanders) and the staffs. Diverse forms were used to organize cooperation, including: the giving of instructions on a map, the working out of questions in the field in conducting command-staff exercises and planned exercises. The daily summing up of the results of the offensive by the army military council also helped to maintain cooperation in the course of the fighting. Here the reasons for various setbacks were established, the positive experience was generalized, the nature of the fighting and the combat tasks of the troops were adjusted and corrections made in the cooperation plan.

Subsequently, such a procedure of work was inherent to the army commanders in the Orel, Belgorod-Kharkov and other operations of 1943.

The art of organizing and maintaining cooperation in the offensive operations of 1944-1945 underwent further development. Thus, 11 days were provided to prepare for the operation of the 37th Army fighting on the axis of the main thrust of the Third Ukrainian Front in the Iasi-Kishinev Operation. (6) The army commander, Lt Gen M. N. Sharokhin, began to coordinate the efforts of the troops on the basis of the decision taken the day before in the morning of 9 August of 1944. By this time, the operations section of the staff had drawn up a draft planning table for cooperation, a sketch map and a procedure table and had given the order to conduct the forthcoming reconnaissance.

The work at the observation post of the 20th Guards Rifle Division which was attended by all the commanders of the rifle corps, the chiefs of staff of the VII Mechanized Corps and the 17th Air Army, the commander of the IX Combined Air Corps, the commanders (chiefs) of the branches of troops of the army, started with the commander giving those present the last information on the enemy, he set out the overall concept of the operation and set missions for the commanders of the rifle corps to break through the enemy's tactical defensive zone. His chief of staff reported on the tasks of the mechanized corps, while the army artillery commander did the same for the artillery. Then the possible procedure of action was played through in the zone of the divisions during the period of the reconnaissance in force, the artillery and air softening up and the attack on the first enemy position. In an analogous

manner the questions were worked through at the observation posts of the 333d and 61st Guards Rifle Divisions. On the following day the same personnel continued work in organizing cooperation on a terrain mock-up. Chief attention was given to playing through different actions of the troops in committing the army mobile group and the second echelon to the engagement. The questions of fire damage on the start line, engineer support and the prompt freeing of the routes were settled. Then the staffs of the formations received the table which had been worked out by the army staff for cooperation, target designation and mutual identification.(7) Characteristically, the last 8 days prior to going over to the offensive, that is, 72 percent of the total time, were given over to organizing combat on the tactical levels. The commander gave particular attention to supervising and helping his subordinates. The chief of staff in the interests of maintaining steady cooperation in the course of the operation carefully thought through the organizing of command posts and communications. Command, observation and alternate control posts were set up and an auxiliary control post was established (during the period of committing the mobile group to battle). The operations group of the 17th Air Army was located at the army command post (with the start of the air softening up, at the observation post), air guidance officers and two or three officers from the artillery formations were sent to the tank brigades with radios.(8)

In the preparations for the Vistula-Oder Operation, the work of organizing cooperation was subordinate to the achieving of a high rate of advance. The commander of the 8th Guards Army, Col Gen V. I. Chuykov, and his staff, for example, in the aim of concealing the plan for the offensive began to coordinate the actions of the formations just 3-5 days prior to its start. Having set the combat tasks, the commander with the formation commanders conducted a reconnaissance in the breakthrough sector and here he coordinated the forthcoming actions of the battalions assigned from the first echelon divisions for conducting the reconnaissance in force with the air and artillery actions. Then at the army command post he played through possible variations of the actions of the main forces on a terrain mock-up and here, using aerial photographic data, the enemy's defenses were shown to a depth of 15-18 km. Having heard the decisions of subordinates on inputs, the commanders made adjustments in the combat planning table which became the basis for working through the questions of coordinating actions in the formations and units. Upon his orders special attention was paid to cooperation of the forward detachments with the main forces.

On 8 January 1945, the commander and chief of staff of the 1st Guards Tank Army and the commanders of the XI Tank Corps and VIII Mechanized Guards Corps arrived at the command post of the 8th Guards Army. They worked out different variations of actions on the start line for committing the 1st Guards Tank Army to battle and with the crossing by the troops of the enemy's intermediate defensive lines, the Brzura and Warta Rivers. Then the army staffs began to work out the cooperation table. In the interests of maintaining close cooperation of the troops and aviation, the command post of the tank army and the auxiliary control post of the 16th Air Army were deployed close to the command post of the 8th Guards Army. For effective reciprocal exchange of information concerning the situation in the course of the operation officers with radios were sent out to the staffs of the 5th Shock Army, the 69th Army

and the 1st Guards Tank Army.(9) This as well as the practice of holding personal meetings of the commanders of cooperating field forces in the area of Uniejow, Poznan and Malsow helped to promptly make adjustments in the cooperation plan.(10)

Cooperation in the 65th Army in preparing for the Berlin Operation was organized under the conditions of regrouping the troops over a distance of 240-290 km. In breaching the enemy defenses they had to cross the Oder River.

In considering that less than 4 days was allocated for preparing for the operation and proceeding from the situational conditions, the army commander, Col Gen P. I. Batov, began the job by traveling with the corps commanders and a group of officers from the field headquarters to the forming up area for the offensive (here the 61st Army was on the defensive). There he conducted a reconnaissance, announced the plan and set the principles for cooperation by stages of the operation (crossing, breakthrough, development of the success on the western bank of the Oder). Then, having provided the corps commanders with an opportunity to work with their subordinates, the commander with a group of generals and officers from the leading sections, visited the command posts of the adjacent 2d Shock Army and 70th Army where he coordinated the questions of supporting the flank, maintaining cooperation in crossing the Oder as well as the actions of the I and III Guards Tank Corps.

Consequently, even before the formations had arrived in the forming-up place [FUP], the major questions of cooperation on the army level had been established. The army staff drew up a combat planning table and established the cooperation and command signals. The plan for cooperation in crossing the Oder was worked out as a separate document. On 14 April, the deputy commander of the 4th Air Army arrived at the command post of the 65th Army with an operations group for coordinating the air support questions.(11)

Under the leadership of the deputy army commander, during the 2 days which remained prior to the start of the offensive, cooperation was organized directly in the field in the formations, units and subunits. Instructions were issued and different variations played through for joint actions of the infantry, artillery, tanks and engineer troops. Due to the limited amount of time the questions of cooperation were most often worked through only on the working maps of the commanders.(12)

An analysis of the experience of the organizing and maintaining of cooperation during the designated operations of the Great Patriotic War makes it possible to point out a number of areas for improving the work of the commanders and staffs to coordinate the efforts of the involved men and weapons.

Among these one must mention first of all the widening content of questions subject to coordination. The main questions of cooperation became such ones as achieving effective fire damage to the enemy employing various men and weapons, ensuring coordination of fire (air strikes) with the actions of the rifle (tank) formations and units in terms of lines, times and tasks as well as complete support for the troops engaged in the fighting.

The questions of coordinating the efforts of the men and weapons in the field and in mock-up began to hold an ever-greater place in the work of the commanders and staffs in organizing cooperation. This had a whole series of positive aspects. To a greater degree they began to consider the particular features of the terrain in employing the branches of troops and in carrying out maneuvers in the course of combat. "A commander should not be afraid," emphasized MSU I. S. Konev in the preparations for the Vistula-Oder Operation, "to crawl on his belly along the front line in order to more correctly and accurately employ all the power of the artillery fire, to accurately direct the tank strikes, to see with his own eyes the approaches to the enemy and anticipate all the difficulties when the advancing units go over to the attack."(13)

In the field and on mock-ups they worked out the questions of the taking up of the initial position by the troops for the offensive, the conducting of reconnaissance in force, artillery and air softening up, the attack on the first position and the major strongpoints in depth, the committing of the mobile groups and second echelons to the engagement, the repelling of counterstrikes and counterattacks and the crossing of water obstacles. The depth to which cooperation was organized continued to grow. This was achieved by employing optical reconnaissance instruments and by setting up observation towers in trees, bell towers and tall buildings, as was particularly characteristic in preparations for the Belorussian Operation.(14) By involving the commanders (chiefs) of the branches of troops (special troops) in the work in the field, the composition of the reconnaissance groups was broadened. As a result, the questions of cooperation were worked out more profoundly and thoroughly.

In the course of the war they began to employ diverse methods and forms for organizing and maintaining cooperation considering the specific situational conditions. Practice showed two basic methods for organizing cooperation: the issuing of instructions on cooperation and the playing through of possible variations of actions in the field, on mock-ups and on maps. The choice of one or another depended upon the time allocated for organizing cooperation, the combat tasks to be carried out, the experience and skills of the command personnel and other conditions.

Proving to be highly effective was such a form of coordinating actions as playing through combat to the total depth of the operation. This contributed to a more thorough understanding by the executors of the combat tasks and the possible methods of carrying them out. Experience was gained in acquiring situational data, in their analysis and troop command. The commanders in this manner simulated the forthcoming actions. From the summer of 1943, an integrated system of exercises was developed for actually working out the questions of cooperation. Tactical exercises, unannounced quizzes, radio drills and battle drill exercises began to be conducted. On the eve of the Berlin Operation, for example, the 5th Shock Army and the 8th Guards Army conducted 2-3 divisional command-staff exercises and up to 10-12 exercises for the regiments, battalions and companies.(15) In the aim of increasing the coordination of actions among the diverse forces, party political measures were also conducted such as meetings of the aktiv, party and Komsomol meetings of the units to be involved in carrying out the common tasks.

In organizing cooperation, an increased role was played by the commanders (chiefs) of the branches of troops (special troops) and their staffs, and as a result of this, as was pointed out in the analysis of the Bobruysk Operation in the field headquarters of the 3d Army, "an unanimous understanding was achieved on the assessment of the enemy's defensive system...the targets were clearly allocated between the artillery, aviation and other troops."(16) The combined-arms staff set the amount of work to coordinate the efforts, it drew up the necessary calculations and information for the commander, it provided supervision and gave help to the inferior command and staff levels. In this manner they carried out the demand of the General Staff directive not to permit the start of the offensive without making certain how cooperation had been organized.

The experience of the war showed that the organization and particularly the maintaining of continuous cooperation of the advancing troops with artillery fire and air strikes to a significant degree depended upon the effective organization of the control posts and cooperation communications. Several trends can be noted in solving this question. By establishing rear, alternate and observation posts along with the auxiliary (temporary) command posts, the headquarters bodies were echeloned along the front and in depth. They were brought closer to the fighting troops (in 1944-1945, the army command posts were located 7-15 km away and the observation posts 1.5-2 km).(17) As a result the commander had an opportunity to respond more effectively to all changes in the combat situation, and to promptly take measures to support cooperation and when necessary organize it anew. Often operations groups headed by the deputy army commander were assigned from the command post to coordinate the efforts of the rifle formations with other forces in repelling counterstrikes and in fighting to retain and broaden bridgeheads. For example, the mission was carried out in this manner in the 8th Guards Army in August 1944 on the Magnuszew bridgehead and in February 1945 on the Kustrin one.

They began to make it a practice of bringing together at the command posts the commanders (and other officials) of the field forces and formations from different Armed Services and branches of troops carrying out common tasks. This was done particularly frequently in breaching the enemy defenses, in committing the second echelons and reserves to battle and in crossing water obstacles. By the start of the Berlin Operation, for example, representatives of the 16th Air Army were at the command posts (observation posts) of all eight first echelon armies of the First Belorussian Front, at four of them there were the commanders of tank armies and the commanders of tank or cavalry corps, and at three commanders of the Dnieper Flotilla brigades. This made it possible for the army commanders and their staffs to efficiently settle the questions of cooperation and ensure coordinated actions on the part of all involved resources.

Significant attention was given to organizing liaison communications. From the summer of 1943, special radio liaison networks began to be established in the armies not only among the command posts but also the observation posts. An important role was assigned to the network of personal commander radios. Liaison aviation was widely employed, particularly in the course of the

operation. The development of multichannel systems became the basic direction for improving liaison communications. For example, in the Berlin Operation there were the liaison radio networks of the fronts and the General Staff (the flank armies of all fronts and the Red Banner Baltic Fleet), telegraph lines and high-frequency telephone circuits between the army and front staffs and army liaison radio networks. There was both direct telegraph and alternate liaison communications between the all-arms armies and aviation (through the air army staff). Moreover, there was high-frequency telephone communications with the air army staff through the front staff. Provision was also made for the formation commanders to tap into any of the liaison radio networks of the armies and fronts.(18)

The experience gained by the army commanders and staffs during the years of the Great Patriotic War in organizing and maintaining cooperation make it possible to conclude that the coordinating of efforts of the men and weapons involved in the operation is an essential condition for achieving success in combat and an engagement and a most important function of the commanders and staffs. This process is diverse, complicated and ongoing in time.

#### FOOTNOTES

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2. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 241, inv. 2593, file 1, sheet 97; folio 382, inv. 8452, file 45, sheet 26.
3. Ibid., folio 353, inv. 66707, file 2, sheets 18-19.
4. Ibid., folio 331, inv. 32114, file 1, sheets 26-29.
5. Ibid., folio 326, inv. 6517, file 5, sheets 121-123, 138-140.
6. Ibid., folio 243, inv. 20371, file 43, sheet 30.
7. Ibid., sheets 29-39.
8. Ibid., folio 381, inv. 8378, file 383, sheets 2-3.
9. Ibid., folio 345, inv. 5497, file 93, sheets 80-82; file 333, sheets 111-112.
10. Ibid., folio 341, inv. 8886, file 5, sheets 6-8.
11. Ibid., folio 237, inv. 2394, file 1339, sheets 1-14.
12. Ibid., folio 422, inv. 10496, file 789, sheets 160-165.
13. Ibid., folio 236, inv. 2673, file 354, sheet 17.

14. Ibid., folio 310, inv. 4376, file 207, sheet 92.
15. Ibid., folio 233, inv. 2356, file 807, sheets 89-91.
16. Ibid., folio 310, inv. 4356, file 207, sheet 92.
17. P. O. Tovstukha, et al., "Upravleniye voyskami v nastuplenii" [Troop Command on the Offensive], Moscow, Voenizdat, 1981, p 36.
18. TsAMO, folio 233, inv. 2372, file 270, sheets 389-392; folio 237, inv. 2412, file 50, sheets 83-86; folio 236, inv. 2715, file 296, sheets 167-169.

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## ORGANIZING, MAINTAINING COOPERATION DURING DIVISION'S OFFENSIVE IN IASI-KISHINEV OPERATION

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[Text] During the years of the Great Patriotic War, the most difficult tasks in the work of the formation commanders and staffs were the organizing and maintaining of dependable cooperation among the troops on the offensive. The skill of the officers and their ability to direct and coordinate the efforts of the units were manifested clearly in carrying these out. The particular features of organizing and maintaining cooperation depended upon the specific situational conditions. This can be seen from the experience of the commander and staff of the 108th Guards Rifle Division in breaking through the deliberate enemy defenses in August 1944 during the Iasi-Kishinev Operation.

During this operation the division as part of the XXXVII Rifle Corps was advancing in the first echelon on the right flank of the assault grouping of the 46th Army of the Third Ukrainian Front on the axis of Chobruchi, Slobozeya (see the diagram). The width of its zone of advance was 3.5 km. An artillery density of 216 guns and mortars per kilometer of front was established on the axis of the main thrust.(1) The immediate organizing of the offensive took around 4 days. Here great attention was given to the questions of cooperation.

After the setting of the tasks the division's commander, Col S. I. Dunayev, gave the regimental commanders around 18 hours so they could make a detailed study of the terrain and the enemy in their areas, take a decision, plan the offensive and be ready to organize cooperation.

The preparations for the organizing of cooperation included the following measures. The formation's staff together with the chiefs of the branches of troops and services drew up a draft combat planning table, a working map for





the commander with the necessary data and calculations, it generalized the recent data on the enemy, on our own troops and the terrain, it established contact with the staffs of the attached and supporting formations and units, it equipped a sandbox and points for organizing cooperation.

The combat planning table was not completely convenient for use in the field. However, this document was essential not only to the staff but also to the division's commander. It helped him more clearly conceptualize the possible development of combat, to determine the men and weapons for carrying out each particular task and coordinate troop actions in terms of goal, lines and time.

In order to provide the commander with conditions for normal work in the field, the staff officers transferred all the basic ideas from the planning table to his working map.

During the period of preparing to organize cooperation, the division's commander with the artillery commander, Lt Col B. A. Kharkevich, thoroughly analyzed the question of the artillery offensive and particularly the employment of direct laying guns; with the divisional engineer, Maj N. N. Fetisov, the procedure for making passages through obstacles. Col S. I. Dunayev spent a significant portion of the time in personal meetings with the adjacent units: the commanders of the 59th Guards Rifle Division and the 320th Rifle Division, Maj Gen G. P. Karamyshev and Col I. Z. Burik. In the course of these meetings, the measures for organizing cooperation were clarified and agreed upon, and particularly with the commander of the 320th Division which with one regiment was to go over to the defensive on the occupied line while two regiments were to exploit the success of the 108th Guards Rifle Division and to reassign to the 108th Division the TOE artillery of the 320th Division until committed to battle.

One of the crucial conditions for the successful organization of cooperation was a careful study and assessment of the possible actions of the opposing 21st Infantry Division. Over the 4 months spent on the Dniester bridgehead, the commanders and staffs had studied the enemy sufficiently completely. Moreover, several days prior to the offensive the staff of the front had supplied the formations with photomosaics of the enemy defenses. This helped to supplement and clarify the available data, particularly on the enemy's lines prepared in depth.

The presence of exhaustive information on the enemy made it possible for the division's commander to adopt a sound plan and the staff to provide effective combat planning.

In analyzing the enemy's possible actions, the staff examined two possible variations: either it with the start of the offensive would not make any substantial changes in the position and strength of its first echelon subunits or it would reinforce them by shifting men and weapons from other sectors. The probability of the enemy's acting according to either variation depended chiefly upon the effectiveness of the fire and the rapidity of advance by our troops. With effective fire damage to the defenses and a high rate of attack

the enemy would be unable to carry out a broad maneuver of men and weapons; in the opposite instance one might expect its actions according to the second variation.

In assessing the enemy's probable actions in the course of the offensive, the commander and staff considered that it would sooner defend the first position on the high bank of the old Dniester channel as this would make it possible for the enemy to keep the entire battle formation of the division under aimed fire and repel the attack with limited forces. The enemy could employ its own regimental reserves in the combat for the first position and the division's reserve (the 35th Infantry Regiment) for holding the second position. The commander and staff assumed that the enemy would put up the strongest resistance on the left flank, in the area of the 305th Guards Rifle Regiment of Lt Col A. Ya. Vermolenko. For this reason, this regiment received shallower tasks. It had more antitank weapons; of greatest importance for it was supporting the left flank of not only the division but also the main grouping of the 46th Army. All the more as the formations of the XXXIV Rifle Corps, the adjacent unit to the left, was to start the offensive by the crossing of the Dniester after units of the 108th Guards Rifle Division had broken through the first line of defense.

The main work of the division's commander to organize cooperation with the commanders of the regiments and reinforcements and the chiefs of the branches of troops and services on the morning of 17 August, that is, 3 days prior to the offensive. This was carried out at the first, second and third points prepared respectively: at the observation post of the 305th Guards Rifle Regiment, in the first trench in the area of the 311th Guards Rifle Regiment and at the division's observation post; a sandbox was set up near this.

The particular features of the terrain in the zone of advance of the 108th Guards Rifle Division were as follows. In front of the forward edge, in the old river course, there flowed a nameless stream some 20 m wide and beyond it commenced the extended (with a steepness of up to 43 degrees) slopes of the bank of the previous Dniester channel and beyond this on the hills lay the village of Chobruchi.

From the points prepared for the work one had a clear view of the terrain and the enemy's defenses on the first position. The high bank of the old river channel concealed the depth of the defenses from observation and this reduced the effectiveness of work in the field. Under these conditions a portion of the cooperation questions had to be depicted for the division's commander on a map and in the sandbox.

Col S. I. Dunayev organized cooperation in the sequence of the particular tasks to be carried out by the troops and each of these had its own inherent characteristic features.

The immediate task of the division, with cooperation being organized in greater detail to the depth of this, included the moving up and taking up of the jump-off line by the first echelon divisions on the right bank of the nameless stream, the carrying out of artillery softening up, the infantry attack and the capture of the strongpoints on the first position, the

repelling of counterattacks by the enemy regimental reserves and in carrying out the following task of committing the second echelon regiment to battle and repelling counterattacks of the divisional reserves; the development of the offensive and the complete rout of the division's reserve and pursuit of the retreating enemy. (2)

One should note the work methods of the division's commander in coordinating the actions of the units and subunits in carrying out these tasks. Col S. I. Dunayev who by this time had commanded the formation for more than a year had developed a definite style, methods and procedures for organizing cooperation. Initially he determined the ultimate aim of the task to be carried out ("ensure covert taking up and equipping of the start line" or "ensure a rapid rush of the infantry and simultaneous attack on the enemy's first trench"). Then he analyzed the enemy's probable actions, assuming here at least two different variations. Sometimes upon his instructions this was done by the staff officers. For each of the proposed variations the subordinate commanders had to adopt a plan and coordinate the actions of the men and weapons.

The division commander settled a number of questions himself, not wasting time on discussing them, and issued these as instructions which were to be unconditionally carried out. He demanded that the regimental commanders, the chiefs of the branches of troops and services report their decisions and proposals on employing the units and services. Having listened to the reports, Col S. I. Dunayev conducted an analysis, noting their strong and weak points, and after this he specified who would act and how as an analogous situation developed in combat, and he clearly defined the methods of achieving cooperation and mutual aid. Professional and sound proposals were always adopted by the commander and put into practice.

Such an approach to working out the questions of cooperation was effective and forced everyone present to think actively and seek out ways for effectively carrying out the tasks. Col Dunayev proceeded from the view that excessive centralism in the organizing of cooperation could lead to the loss of independence for the regimental commanders in combat, teach them to wait for instructions or to direct the actions of the subunits following the plan which had been previously stipulated by the senior chief but which now did not completely conform to the specific situational conditions.

A characteristic trait in the work of the formation's commander in organizing cooperation was the ensuring of high organization and professionalism. The length of the reports was strictly limited. Each officer knew that the content of the received combat missions, the decisions of the commanders of the division and the regiments, the chiefs of the branches of troops and services, the organization of the enemy defenses, the allocation of reinforcements and so forth should be mastered by them ahead of time, prior to taking to the field and for this reason did not have the right to repeat these here. Also instructive was the fact that the officers were obliged to change into a soldier's uniform and strictly observe other camouflage measures while they were at the work points for organizing cooperation.

Then, in August 1944, the first particular task consisted in the moving up and occupying of the starting line by the first echelon regiments on the right bank of the nameless stream. In this instance there would be no need to cross the stream during the attack, the start line could be moved to 100-120 m from the enemy defenses and this would make it possible for the infantry to more quickly reach the steep bank of the old river channel.

The given task could be carried out with the prompt making of bridges across the stream. According to the calculations of the staff and the divisional engineer, at least four bridges and ten foot bridges would have to be built for the crossing of the artillery and infantry.(3) The difficulty of erecting them stemmed from the fact that the enemy's forward defensive edge ran 130-150 m from the stream. The slightest failure to observe the secrecy requirements could cause the enemy to detect the plan for our forthcoming offensive.

Considering this, the divisional commander clearly outlined the necessary measures in organizing cooperation. In particular, the combat engineer battalion was to prepare all the bridge elements in the rear, and here they conducted drills in assembling them and during the night prior to the offensive were to install the bridges without excessive noise. In carrying out these instructions, the combat engineers sought an analogous stream in the close rear, they made the bridge elements and worked on the procedures for their noiseless assembly. There was no longer any need to give commands as each soldier knew what he had to do and how.

It was essential to determine the places for installing the bridges. From the first point set up at the observation post of the 305th Guards Regiment and located on the second trench of the first position, it was impossible to see the stream channel. The commanders of the division, the 305th Regiment and the divisional engineer moved up to the first trench which ran along the bank. After a careful study of the covert approaches, convenient descents and exitways, and other terrain conditions, the places were designated for setting up two bridges and five foot bridges in the zone of the 305th Regiment. Similar work was carried out in the zone of the 311 Guards Rifle Regiment when the group moved to the second point.

For supporting the actions of the combat engineers and for securing the bridges, the formation's commander obliged the regimental commanders to assign one rifle company from the second echelons.

The successful taking up and equipping of the start line close to the enemy defenses required exceptionally high organization and covertness from the regiments. In the event of firing or the repelling of surprise enemy attacks, Col S. I. Dunayev assigned three artillery battalions. They were ready from the previous firing positions to neutralize the gun emplacements and help the rifle companies; in addition, in firing at the enemy defenses, they drowned out the noise of the work of the combat engineers in erecting the bridges. From the second echelon battalions crews of medium machine guns and antitank guns were moved up to the first trench on the left bank of the stream in order, if necessary, to support the fighting of the subunits which had crossed the water obstacle. All the personnel was required to know the concealment

measures. The formation's commander demanded that the regimental commanders complete all the work of equipping the starting line by 0300 hours on 20 August and that the dug trench be carefully camouflaged. The division's staff was entrusted with supervising the fulfillment of the camouflage measures. As a result, the erecting of the bridges and the moving up of the regiments to the right bank of the water obstacle were carried out at the designated times and not detected by the enemy.

The second particular task for which cooperation was organized was the carrying out of artillery softening up. This had already been planned. The targets and lines which were to be fired against were studied ahead of time in a most careful manner and allocated. This was one of the important conditions for dependable fire damage of the defending enemy with a low average density of artillery and mortars (a total of just 307 guns and mortars which was around 90 guns per kilometer of front of advance).(4)

For this reason in his report the artillery commander went through the configuration of the artillery softening up. This was to be carried out over 105 minutes and include four intense shellings, two periods of neutralization and destruction and one false shifting of fire in depth.(5) For destroying the firing positions and defensive works on the first position, not only the antitank guns but also the divisional cannons and howitzers were set for direct laying. As a total during the night before the offensive 52 guns were moved up and of these 24 were 45-mm, 12 were 76-mm regimental artillery, 12 were 76-mm divisional artillery and 4 were 122-mm.(6) The areas of the firing positions for them were set by the division's commander and covered the terrain within the first two trenches along the left bank of the nameless stream. The choice of the firing position for each gun was entrusted directly to the artillery chiefs of the first echelon regiments.

In the aim of ensuring the successful fulfilling of the tasks by the artillery during the course of artillery softening up, some 55 minutes after its start, during the false shifting of fire in depth, the infantry with a shout of "Hurrah!" by the firing of signal pistols and small arms and by the showing of dummies and targets was to feign the supposed start of the attack. Then the artillery again was to shell the targets on the first position. If the surviving Nazis had rushed out of their shelters to their weapons, then they would come under heavy artillery fire. As was later indicated by prisoners, during this period the Nazis suffered the most losses on the defensive.

It was planned that under the cover of artillery fire the combat engineers would complete the making of passages through the enemy minefields and wire obstacles. The divisional engineer in the field indicated the passages designated and agreed upon with the regimental commanders with eight each in the zone of every first echelon regiment. Col Dunayev approved the proposal of the divisional engineer, having set out a number of measures to ensure the work of the combat engineers.

One of the most important tasks the fulfillment of which required the specially careful organization of cooperation was the infantry attack and the capturing of strongpoints on the first position. The rate of advance of the companies on the steep slopes could not be great. For this reason it was



essential to make fullest use of the results of the artillery softening up so that in a single rush the no-man's-land could be crossed and the attack carried out before the enemy had recovered from the shock. For this reason, no one had any doubts as to the advisability of the single echelon configuration of the first echelon battalions with the assigning of a rifle platoon as the reserve. Moreover, in each of these battalions an assault group was organized consisting of 20 submachine gunners, 2 machine gunners, 3 chemical warfare soldiers with manpack flamethrowers, 3 combat engineers, a squad of antitank guns reinforced with one or two 45-mm guns. The groups were made up of the most experienced and physically hardest soldiers. In using the passages through the obstacles made by the combat engineers, they were to be the first to break into the forward defensive edge and without waiting to push decisively deep into the defenses.

It had to be considered that with the start of the attack the basic portion of the 45-mm guns would be removed from their firing positions and would move up along with the infantry. If the moving up of these guns was delayed, then the rifle companies, having attacked the forward defensive edge, would be without dependable fire support and this could lead to a dying out of the attack. In order that this not happen, the division's commander ordered that the firing positions of the 45-mm guns be in the immediate proximity of the bridge locations, that the gun crews be reinforced with riflemen from the second echelon battalions, that drills be conducted with them ahead of time and that drag ropes and lines be prepared.

In the course of seizing the strongpoints on the first position, the carrying out of counterattacks by the enemy regimental reserves could not be excluded. Col S. I. Dunayev in the field indicated their possible directions. These would be basically in the flanks of the advancing regiments. The composition of counterattackers was considered to be up to an infantry battalion with eight or ten tanks. According to the different variations of the developing situation, the regimental commanders as well as the artillery commander of the division reported their plans. It was considered advisable under any conditions not to reduce the rate of advance into the defenses, employing only a portion of the forces for repelling counterattacks. For this reason in capturing the strongpoints the formation's commander demanded that they not become engaged in extended fighting and not carry out frontal attacks. Considering the given situation, the regimental commanders made their plans. The basic efforts of the battalions were aimed at outflanking the strongpoints and attacking these from the rear and flanks.

The cooperation system was worked out carefully in repelling counterattacks and defeating the enemy divisional reserves as well as committing to battle the second echelon of the 108th Guards Rifle Division, the 308th Guards Rifle Regiment. These tasks were closely coordinated and for this reason were examined simultaneously. While the previous work of organizing cooperation had been carried out in the field and on maps, the designated tasks were worked through in the sandbox. The staff officers here had first worked out two variations of the situation: the first (main) when the enemy divisional reserve (the 35th Infantry Regiment) launched a counterattack in the course of the fighting to hold the second position, and the other when the reserve went over to the defense of the strongpoints deep in the defenses.



In both variations it was considered that the 308th Guards Rifle Regiment by this time would be committed to battle. In the first variation the decision of the formation commander came down to having the counterattack being repelled by a portion of the forces from the left flank 305th Guards Rifle Regiment with the division's antitank battalion firing from a stationary position while the 308th Guards Rifle Regiment committed to battle through the zone of the 311th Guards Rifle Regiment would attack the counterattacking grouping in the flank and together with the 305th Regiment complete its defeat. The full strength of the divisional artillery group would be used for the fire support of the regiments.

In following the second variation, after brief artillery shelling the 311th and 308th Regiments on a narrow sector would break through the line held by the enemy reserve; the 305th Regiment would continue active operations, in supporting the division's left flank. For each variation plans were heard by the commanders of the rifle corps, as well as the proposals of the artillery commander, the chief of the operations department and the divisional engineer; after this Col S.I. Dunayev clearly defined the tasks and the methods of carrying them out for the rifle regiments, the artillery, the reserves, the combat engineer units and coordinated their actions. As subsequent events were to show, the sound working out of the cooperation questions was one of the conditions for the rapid defeat of the enemy reserves.

After breaking through the second position and repelling the counterattack of the enemy divisional reserves, it could not be excluded that the enemy would pull back its surviving subunits and units to the second defensive position. A forward detachment consisting of a reinforced battalion from the 311th Regiment was to be sent out for the immediate pursuit of the retreating enemy and for preventing its organized taking up of the defense on the second line. The task of the detachment was, in outflanking the strongpoints and not engaging the retreating enemy subunits, to quickly reach the second line and without a halt capture the strongpoint in Slobozeya. In addition to the forward detachment, the main forces of the 311th Regiment as well as a battalion from the 308th Regiment were to be used for pursuit.

In the course of organizing cooperation, certain adjustments were made in the previously prepared draft of the combat planning table. Considering these changes the table was further worked out by the staff and copies of the table issued to the regiments.

Then analogous work of organizing cooperation was carried out in the regiments. The division's commander conducted an exercise in the sandbox and on maps with the commanders and chiefs of staffs of the regiments, with the officers of the formation's headquarters as well as the commanders of the attached and supporting formations and units. In the course of this they again analyzed and clarified the questions of cooperation in carrying out a series of particular tasks. One must note the great effectiveness of this exercise, as the already elaborated cooperation systems of the regiments were superimposed on the system of cooperation for the division.

In the course of preparing for the offensive, tactical exercises were carried out with the companies and battalions. Here they actually studied and worked out the questions of cooperation, particularly in the course of the attack on the forward defensive edge and the capturing of the enemy strongpoints.

The maintaining of steady cooperation in the course of the offensive was a major task for the commanders and staffs. No matter how carefully cooperation was organized prior to the attack, in the course of fighting the need for adjustment arose and in a number of instances a revision of the cooperation system considering the developing situation.

With the start of the attack of major importance were the prompt moving up of the support guns behind the infantry, the rapid concentration of fire against the surviving enemy batteries, strongpoints and groupings which were preparing to launch counterattacks. Most often the adjusting of cooperation was manifested in the retargeting of artillery and mortar strikes to objects which turned out to be the most dangerous in the course of carrying out the mission as well as the maneuvering of the subunits and reserves for providing help to the units in defeating the enemy.

In the zone of advance of the 311th Guards Rifle Regiment (commander, Lt Col I. P. Rudko) the fighting developed successfully. The enemy, being securely neutralized by the artillery fire in the strongpoints of the first position was unable to put up strong resistance. A different situation developed on the left flank in front of the 305th Regiment. The rate of its advance after capturing the first strongpoints and structures on the edge of Chobruchi declined and then the subunits became engaged in heavy extended fighting and began to suffer losses. The disruption of cooperation was not a consequence of mistakes in the command of the subunits on the part of the regiment's commander and staff. The reason was that the enemy had reinforced its grouping in front of the regiment's advance. Benefiting from the fact that units of the 9th Infantry Division defending the line opposite the adjacent unit were not tied down in fighting, they partially were shifted opposite the 305th Regiment.

The 311th Regiment an hour after the start of the attack had carried out its immediate task and continued to develop the offensive. Its successful actions to a large degree depended upon the initiative, decisiveness and support of cooperation directly in the battalions. Thus, the commander of the 2d Battalion, Capt S. M. Kachalo, having tied down the enemy with one company from the front in the strongpoint in the area of Chobruchi, sent out two flanking companies. As a result of the coordinated surprise attack, the strongpoint and the headquarters of one of the battalions of the 4th Mountain Rifle Division were captured.

By a counterattack by two battalions with 12 tanks the enemy somewhat held up the advance of the 311th Regiment. The main strike was made against the subunits of the 1st Battalion of Capt I. N. Pavlenko. The previously elaborated variation of cooperation in repelling the counterattack did not correspond to the existing situation. For repelling the counterattack by stationary fire the regiment's commander called in two battalions and set the entire battalion into action. By agreement the adjacent 179th Guards Rifle

Regiment launched an attack in the flank of the counterattacking grouping. By actions that were jointly coordinated in time and goal the enemy grouping was rapidly defeated.

After this the enemy put up resistance to the 311th Regiment only at individual strongpoints deep in the defenses. All of this created favorable conditions for a rapid advance. One reinforced battalion was assigned as a forward detachment in the aim of capturing a sector on the enemy's second defensive line.

For restoring the disrupted cooperation, the providing of prompt aid to the regiments with the men and weapons from the division and adjacent units was of great importance. The carrying out of this task was aided by bringing the division's observation post closer to the forward subunits and this made it possible to immediately consider changes in the situation on the battlefield as well as maintain continuous communications, ascertain the reasons for the violating of cooperation on the spot and eliminate them.

Thus, the effectiveness in organizing cooperation in the 108th Guards Rifle Division on the offensive was determined primarily by careful preparation of the commanders and staffs of all levels for this work, by carrying the work out basically in the field and in the sandbox, and by the employing of diverse methods by the formation's commander to ensure the creative activeness of the involved officers. Also effective was the practice of working out cooperation questions considering at least two variations of possible enemy actions in the course of carrying out each particular task by the division's units.

Of crucial significance in organizing cooperation was the achieving of dependable fire damage to the enemy under the conditions of insignificant superiority over it. Success was brought about by preparing fire not only against accurately reconnoitered enemy strongpoints, firing positions, reserves and control posts and by bringing up a significant number of guns into the companies for firing with direct laying. Maximum employment of the results of the fire damage to the enemy was achieved by preparing the rifle units to conduct the attack at a rapid pace and to carry out a decisive maneuver of the men and weapons in the course of the fighting. The creative approach of all the commanders and staffs to organizing cooperation played a major role.

For maintaining cooperation in the course of the offensive, of great importance were the prompt receiving of situational data from subordinates, the rapid maneuvering of men and weapons in the course of the hostilities, the systematic supervision over the precise fulfillment of the set tasks by the units and the elimination of factors which impeded or disrupted cooperation.

Also useful were the exercises and drills conducted prior to the offensive for the leadership of the headquarters bodies, the units and subunits and in the course of these the questions of cooperation were worked out.

Cooperation which was carefully organized prior to the offensive and quickly adjusted in the course of combat considering the existing situation was one of the decisive conditions for the successful breakthrough of the enemy's

deliberate defenses and for launching together with adjacent units a crushing defeat against the units of the 4th Mountain Rifle Division and the 9th and 21st Infantry Divisions.

#### FOOTNOTES

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 1299, inv. 1, file 9, sheet 180.
2. Ibid., sheets 181-184.
3. Ibid., folio 4794, inv. 555540, file 4, sheet 74.
4. Ibid., folio 1299, inv. 1, file 9, sheet 184.
5. Ibid., sheet 181.
6. Ibid., file 51, sheets 119-120.

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## EXPERIENCE OF CONTROLLING ARTILLERY GROUP FIRE DURING OFFENSIVE OPERATIONS OF GREAT PATRIOTIC WAR

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[Article by Doctor of Military Sciences, Professor, Honored Scientist of the RSFSR, Maj Gen (Res) G. F. Biryukov]

[Text] The main principles of command and control of artillery and the establishing of artillery groups were worked out prior to the Great Patriotic War. In particular, the guiding documents pointed out that command and control of artillery should be carried out by the commander of a corps (division, regiment) through the appropriate artillery chief. The artillery units (subunits) involved in an offensive were either to be assigned to the rifle (cavalry, tank) formations, units and subunits or employed for their support. Here a distinction was made between the two methods of command of the artillery: centralized by the senior combined-arms (artillery) chief and decentralized by the commander of a regiment (battalion, company). It was felt that centralized command to a greater degree ensured the maneuvering of fire in the aims of massing it on the crucial sectors in breaking through the enemy defenses.(1) For conducting combat operations it was proposed that the following be established: in the divisions artillery infantry support (PP) group; in the corps according to the number of divisions carrying out a breakthrough there would be long-range (DD) artillery groups and artillery destruction (AR) groups. The PP groups were to be established from the TOE and attached artillery and should carry out tasks in the interests of the division as a whole. For supporting the regiments these groups fought only in the instance when they had not been given tasks by the senior artillery chief.(2)

During the years of the Great Patriotic War the theory and practice of establishing artillery groups underwent further development and the procedure for their organization, purpose, name and even numbering system were fundamentally altered. This occurred in keeping with the quantitative and qualitative growth of artillery weapons and the gaining of experience in the command of artillery and its fire by the combined-arms and artillery chiefs. The artillery groups were established on all levels (regiments, divisions, corps, armies and even fronts) although in truth not everywhere simultaneously and not fully.

With the issuing on 10 January 1942 of the directive of Hq SHC concerning the establishing of assault groupings and an artillery offensive, the organizing of artillery groups on all levels became a rule. However, as before the main principle was the specializing of artillery groups according to specific purpose but now with direct subordination to the corresponding all-arms commanders. With the elimination of the corps element of command, the DD groups began to be organized in the armies and more rarely in divisions while the PP groups, due to the shortage of artillery, were in the divisions and sometimes regiments. In the latter instance command of the group was carried out by the division's commander (artillery chief).

In 1943 and the first half of 1944, the questions of the subordination, effective strength and length of existence of the artillery groups, the procedure for using one or another type (caliber) of artillery in the appropriate artillery groups had not been completely resolved. On the basis of an analysis of the operations conducted in 1944, the principles were elaborated for establishing a new artillery grouping not according to specific purpose but rather according to the organizational-tactical principle. The artillery group was assigned the number of the unit (formation, field force) for which it had been organized and the all-arms commander had at his disposal the corresponding artillery group for the entire period of combat (operation). The new artillery grouping envisaged the establishing of regimental (PAG), divisional (DAG), corps (KAG) and army (AAG) artillery groups. In addition to the KAG the corps were permitted to have counterbattery bombardment groups (KBB), and in the armies if the AAG included long-range cannons, there were DD subgroups. In breaking through fortified areas there were plans to establish artillery destruction (AR) groups with the incorporation in them of 152-mm guns as well as larger caliber. These were established, for example, in storming the fortress of Königsberg, in Berlin, and in the breaching by troops of the First Far Eastern Front of the zone of fortified areas of the Kwantung Army in the course of the Manchurian Operation.

Control over the fire of the artillery groups was a major component part in controlling artillery in the offensive operations of the Great Patriotic War. This represented a range of measures carried out by the artillery commanders and staffs in the aim of causing the greatest damage to the enemy by artillery fire in the specific combat situation and consisted of the preparation and direct control of fire. Preparation included determining the position and nature of the targets, the planning of fires, the carrying out of measures for topographic and meteorological support, the inspecting of the sight devices of the guns, the conformity of the ballistic characteristics of the shells and mortar shells to the standard values as well as the settings for firing for effect and the organizing of communications. Direct leadership of the fire consisted in the setting of the fire tasks, determining the weapons and the methods of carrying out the tasks, the calling in, ceasing and correcting of fire and supervision of the firing results.

The choice of the targets (objects) to be hit was preceded by careful reconnaissance and in the course of this a most detailed study was made of the targets on the forward edge and in the near depth of the enemy defenses and

which were to be neutralized or destroyed during the period of the artillery softening up and support for the attack.

The accuracy of our artillery's fire depended largely upon how dependable were the intelligence data. For this reason the reconnaissance of the breakthrough sectors which preceded the planning of the artillery offensive was frequently carried out not only by the commanders of the artillery groups and the artillery subunits and units included in them but also by the command personnel of the combined-arms command elements, right up to the commander of a front. "We, the command of the front, the army commanders, the corps commanders and the regimental commander, together with the artillery troops and aviators," wrote MSU I. S. Konev, "examined the entire forward edge literally by crawling on our hands and knees, designating the main objectives of the attack."(3)

During the period of preparing for the offensive operations, special attention was given to detecting the enemy artillery grouping. The fixing of the enemy artillery and mortar batteries depended largely upon the actions of the artillery observation and air reconnaissance and the effectiveness of this increased significantly during the third period of the war with increased artillery observation equipment and air reconnaissance in the armies (see the table) and the operational subordination of the separate correction-reconnaissance air regiments (okrap) to the artillery commanders of the fronts.

Allocation of Artillery Reconnaissance Facilities in Certain Armies  
of First Belorussian Front in Vistula-Oder Operation (January 1945)\*

| Armies      | Reconnaissance<br>Artillery<br>Battalions                                   | Spotter<br>Aircraft                               | Observation<br>Balloons                  |
|-------------|---|---|--|
| 61st        | 45th oradn [Sep.<br>Recon. Art. Btln.]                                      | 4 aircraft of 98th<br>okrap                       | 3d Detach. of 6th<br>vdan [balloon unit] |
| 5th Assault | 725th, 831 oradn,<br>radn [Recon. Art.<br>Btln. of 44th Gds.<br>Art. Brig.] | 6 aircraft of 98th<br>okrap and 3d Night<br>okrap | 1st and 2d Detach.<br>of 4th vdan        |
| 8th Guards  | oradn of 6th akp<br>[Art. Reg.]   | 6 aircraft of 98th<br>okrap                       | 3d Detach. of 4th<br>vdan                |
| 69th        | 810th ordan, TOE<br>radn of 62d Art.<br>Brig.                               | 8 aircraft of 93d<br>okrap and 3d Night<br>okrap  | 2d Detach. of 6th<br>vdan                |

\* Table compiled from documents of TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 233, inv. 2317, file 75, sheets 28-29.



The integrated use of ground and air reconnaissance made it possible to detect with sufficient completeness the location of the enemy batteries. For example, during the period of preparing for the Iasi-Kishinev Operation, in the area of the 27th Army, the degree of detecting the enemy batteries was 70-80 percent(4) and this created good conditions for successfully carrying out the tasks of counterbattery bombardment by the army and corps artillery groups.

The extensive network of observation posts of the troop artillery reconnaissance (commander, forward, lateral and so forth) and reconnaissance sweeps played a major role in clarifying the coordinates of the artillery firing positions and other targets and objects to be hit in planning the artillery offensive. On individual sectors of a front the density of observation posts approached 80 and more units per kilometer. Thus, by the start of the Iwów-Sandomierz Operation the density of observation posts was 83 posts per kilometer on the breakthrough sector of the XXI Rifle Corps of the 3d Guards Army from the First Ukrainian Front.(5)

All of the objects and targets marked for fire damage were plotted on blank maps with a scale of 1:25,000 or 1:50,000 and these were issued to the artillery commanders up to the level of the battery commander, inclusively.

The fire tasks for the artillery groups were usually set by the combined-arms commanders and senior artillery chiefs and sometimes by the group commanders if this was necessitated by the conditions of the developing combat situation.

The planning of fire in the artillery groups was carried out on the basis of the general plan of the artillery offensive considering the scope of the fire tasks, the designated degree of damage and consumption of ammunition. For control of the fire, the staff of the artillery group worked out a fire table and a map for its control. On the latter they designated the zone (sector) of advance for the combined-arms field force (formation, unit), the observation posts and firing positions of our artillery (down to the battery level), the position of all the known major enemy targets were given along with the fire tasks, the number of the targets (objects) for which fire was to be prepared, their coordinates and dimensions along the front and in depth, the main and supplementary fire zones, the procedure for the moving of the groups, the main direction of fire, the radio call signs and the command and control signals.

The commanders of the artillery groups allocated the targets between the artillery subunits involved in hitting them proceeding from the nature of the targets, the dimensions and distance from the firing positions of the battalions (batteries), the number of artillery in the group and the performance of the available artillery systems.

Depending upon what fire tasks were set for the artillery group (neutralization and destruction of batteries, destruction of defensive emplacements, the wearing down of enemy personnel and so forth), one or another type of fire could be employed. For the neutralization (destruction) of targets in the course of the artillery softening up concentrated fire was planned for the entire group (overlapping) or the fire of individual

battalions (batteries). The artillery groups also participated in the massed fire carried out by the artillery of the army (corps, division).

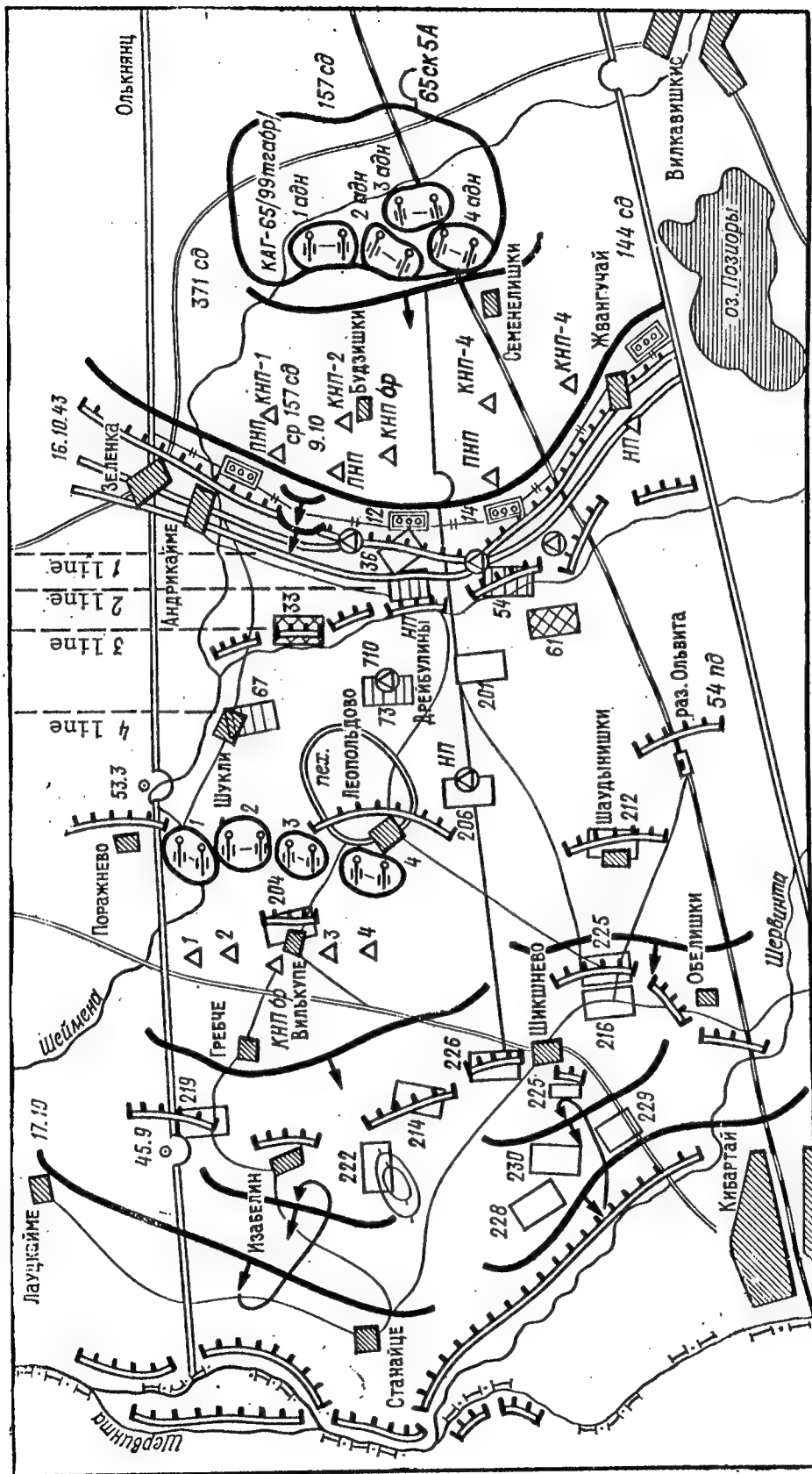
In selecting the type of fire which should be employed in the course of the artillery softening up, the commanders of the artillery groups considered the degree of engineer organization of the enemy strongpoints on the forward edge and deep in the defenses. Against strongly fortified strongpoints they employed concentrated fire. For carrying this out they designated subunits armed with large caliber artillery systems (122- and 152-mm howitzers and 160-mm mortars) or employed the overlapping fire of several subunits. For example, the 99th tgabr [Heavy Howitzer Artillery Brigade] fighting as part of the artillery group of the LXV Rifle Corps of the 5th Army on the Third Belorussian Front (see the diagram) after careful reconnaissance of the enemy defenses and the preparation of fire in the course of the artillery softening up for the attack, neutralized the strongpoints on the East Prussian border. The degree of damage was 20-25 percent.(6)

Depending upon the order of firing at a strongpoint, the commanders of the artillery groups determined the setting of the fuze. If the firing at the strongpoint was planned for the first intense shelling, then it was considered advisable to set approximately 50 percent of the fuzes for fragmentation and high-explosive action. In the subsequent shelling the firing was carried out with a fuze setting for delayed action. After the destruction of the defensive works, firing was again made with shells set with the fuzes on fragmentation action.

In firing against artillery batteries the fuzes were set somewhat differently. If the battery was to be neutralized at the very outset of the artillery softening up for the attack, when the personnel was still in the shelter, then a large portion of the shells was basically employed for high explosive action. For example, on the Leningrad Front where the enemy batteries were particularly well dug in, this was characteristic also for the subsequent shelling. In neutralizing batteries located in open trenches, the shelling of their area was usually carried out with three-five fan settings of the sight for effective damage but employing only around 10 percent of the fuzes set for high-explosive action.(7) If the shelling of the batteries was to be carried out 2-4 minutes after the start of the artillery softening up, when the gun crews were outside the shelters, then up to 50 percent and more of the shells had the fuzes set for fragmentation action.

The accuracy of the fire during the period of the artillery softening up for the attack was ensured by having the group subunits employ the method of the complete preparation of initial data, using ranging guns, registration fire and ranging of the fire shift.

With the start of the infantry and tank attack the commanders of the corps and army artillery groups devoted chief attention to controlling their fire against the enemy artillery and mortar batteries. For the dependable neutralization of one enemy battery, they usually employed two-three batteries from a group with the expenditure of 200-500 shells.



Fire Tasks of 99th tgbр as Part of the KAG-65  
inb Breaching the Enemy Defenses (October 1944)

The commanders of the regimental and divisional artillery groups provided fire support for the advancing troops using the rolling barrage and successive concentration of fire methods. If concentrated fire was employed and the rate of advance was sufficiently high, the group commanders took measures to provide final reconnaissance of the centers of resistance and made repeat brief shellings or gave the command to the battalion commanders to have individual batteries carry out correcting fire.

Upon the request of the commanders of the combined-arms formations and units, the commanders of the artillery groups employed blinding of the enemy and other methods which increased the effective employment of artillery in going over to the support of the attack and in supporting it. For example, in the zone of advance of the 2d Guards Army of the Fourth Ukrainian Front in the Crimean Operation, in the rolling barrage system of 8 April 1944, the PAG and DAG subunits fired smoke shells simultaneously at two lines.(8) The blinding of the enemy helped the successful offensive. In order to conceal the transition from artillery softening up to support for the attack and not permit a gap in the artillery fire and the movement of the attacking subunits, the artillery group commanders employed the false shifting of fire in depth with the immediate return of the fire to the forward edge, extending in time the volleys of the rocket artillery.

With the development of combat in depth of the enemy defenses, for repelling enemy counterattacks, for holding the captured lines and for supporting the boundaries and flanks and in the aim of preventing the retreat of the artillery, the artillery groups conducted fixed and rolling barrage fire. The planned and unplanned fixed barrage fire represented the firing of a group against target sectors distributed between the battalions (batteries). This was opened up upon a signal of the group commander and also halted upon his command. The initial settings for the firing at sectors by fixed barrage fire were determined by ranging for the immediate sector, by calculating the shifting of fire from the registration point or on the basis of data of a ranging gun.(9) In planning fixed barrage fire, the staff of the artillery group planned for the firing of each battalion (battery) against several sectors. This was done so that on the most important sectors it was possible to call in the overlapping fire of two or three battalions.

Creeping barrage fire [PZO] was carried out by the artillery groups with the overlapping concentrated fire of their battalions (in preparing for unplanned PZO as well as in the form of the concentrated fire of the groups with the allocation of the target sectors between the battalions. The PZO was prepared in the course of the offensive for repelling infantry and tank counterattacks. With overlapping fire by the battalions, the group commander, having determined the direction of the enemy's attack, chose the first line and transmitted the coordinates of its center to the battalions, he indicated the direction and the width of the front of the infantry and tank attack and the number of PZO lines and provided other information. In firing with the allocation of target sectors between the battalions, the group commander after determining the direction of the enemy's attack and choosing the first line of the PZO, designated the sectors for each battalion of the group and transmitted to their commanders the data necessary for preparing and conducting fire.

In conducting reconnaissance in force the artillery of the regimental artillery groups participated in neutralizing and destroying the enemy artillery and mortar batteries and emplacements on the forward edge of the enemy defenses, it fired at individual targets in depth and destroyed the Nazi trenches, communications trenches and observation posts. In the course of the attack by our subunits, the artillery of the groups upon the signals of their commanders carried out successive concentration of fire and in supporting the advancing troops interdicted enemy counterattacks by fixed barrage fire.

Under nighttime conditions the commanders of the artillery groups, particularly the PAG and DAG which included howitzer and mortar subunits armed with 122-mm guns and 120-mm mortars, assigned artillery equipment for illuminating targets and terrain, for blinding the enemy observation posts and for target designation for our troops and aviation, and they set the signals for calling in, opening and ceasing fire (illumination). For supporting fire control under nighttime conditions at the firing positions and observation posts they prepared nighttime illumination devices for the work areas, sights and firing marks; the directions were marked to the reference points and to the main direction. In order to ensure immediate opening up of fire, duty officers, observers and duty artillery subunits were assigned, command signals were set using different colored illuminating rockets, tracer bullets and shells, flashlights, white and yellow illuminating ammunition, and the questions of cooperation and fire control were clarified.

During an offensive in the mountains the chief emphasis was put on increasing effective artillery fire against the enemy's forward edge and the immediate defensive depth. Here artillery scouts were sent out from the artillery groups to the particularly crucial sectors of advance of the regiments and divisions and they precisely determined the forward edge of the enemy defenses and discovered the enemy fire plan. The group commanders widely employed the so-called mobile observation posts and these were responsible for reconnoitering up to 65 percent of all targets. For reconnoitering deep in the enemy defenses, special reconnaissance-correction groups were sent into the rear. For example, on the Fourth Ukrainian Front in the course of the Carpathian-Dukla Operation, there were nine of these. Each such group included: an officer who was the group commander, three-five scouts, two radio operators with RB or RBM radios and one or two combat engineers. The group usually operated in the enemy rear from 3 to 5 days, calling in and correcting artillery fire from the artillery group against the most important targets in depth.(10)

Due to the fact that in locating listening posts in the mountains at various elevations (different meteorological conditions), the recording of the sound was often distorted, reconnaissance of the batteries and the conducting of effective counterbattery bombardment was a particular difficulty under mountainous conditions. For this reason significantly more time had to be spent on organizing sound ranging than in the flatlands. The deployment line of the listening batteries had to be selected on slopes facing the enemy and

in such a manner that the listening posts were located on one elevation and did not have an intervening ridge 2-4 km in front. Only in this instance was the sound wave not distorted and the enemy batteries fixed with sufficient accuracy.

The shifting of fire from registration marks and the use of the data of a ranging gun or mortar were the main methods for determining the settings for firing for effect in the mountains. A ranging gun (mortar) was employed, as a rule, on the scale of an artillery group (battalion) and was located in the middle of the area of its firing positions. The marks for registration were selected as much as possible in the middle of the target area. The concentrated fire of an artillery group (battalion) in firing to neutralize unobservable open or sheltered Nazi personnel and weapons located on slopes facing the firing positions and on the back slopes with an angle of over 20 degrees in all instances was carried out on three sight settings with a shift equal to one-third of the target depth.

For destroying and neutralizing targets as well as for preventing the maneuvering of the enemy in defiles and mountain passes, sectors of concentrated and fixed barrage fire were prepared ahead of time.

We should also point out such a particular feature of controlling the artillery of artillery groups in the mountains as the determining by the group staffs of the areas of dead spaces which were taken into account in planning the planned and unplanned massed and concentrated fire.

Due to the difficulties arising in moving, the artillery (particularly the divisional) often fell behind and was forced to fire at maximum ranges and a great displacement. This led to an increased consumption of ammunition and reduced firing accuracy. Due to the ruggedness of the terrain, reconnaissance, target designation, registration and the correcting of fire for effect were sharply impeded. For this reason with the development of the defensive the PAG and DAG commanders often made it a practice of using smoke shells for target designation and ranging with the subsequent concentration of fire against the given target by the battalion or even the entire group. Registration with smoke shells (mortar shells) provided up to a 50 percent savings in ammunition and time in comparison with registration by conventional ammunition. For carrying out these tasks the subunits of the artillery groups usually had in the unit of fire some 10-20 percent smoke shells. If these were not available the registration was carried out by volleys of platoons and batteries.

Thus, the experience of the combat employment of artillery during the years of the Great Patriotic War showed that the controlling of fire by the artillery groups was an aggregate of prepared measures and practical activities by their commanders and staffs in the aim of the prompt and effective employment of artillery fire in the interests of causing maximum damage to the enemy in the course of the offensive.

Stable fire control was achieved primarily by the presence of an extensive network of observation posts, by the continuous conducting of reconnaissance and final reconnaissance of the enemy, by the combined placement of the



combined-arms and artillery commanders, by the early planning of the fire, by the designating of uniform markers and fire control signals as well as by the employing of effective methods of target designation.

Effective fire control was ensured by the following: by the skillful selection of the type of fire, the calibers of the guns, ammunition and fuze setting; by the involvement of the necessary number of subunits in the firing; by the employment of a sufficient amount of ammunition; by determining the length of fire to achieve the necessary degree of damage; by choosing the most effective method of firing on the targets; by the accuracy of determining the target coordinates; by the allocation of the targets and tasks in accord with the combat properties of the artillery systems and the fire capabilities of the group subunits; by continuous cooperation with the advancing infantry and tanks; by the correcting of fire and the monitoring of its results.

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3. I. S. Konev, "Sorok pyatyy" [Forty-Five], Moscow, Voenizdat, 1970, p 8.
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6. See: "Taktika artillerii v voyevykh primerakh (Podrazdeleniya i chasti)" [Artillery Tactics in Combat Examples (Subunits and Units)], Moscow, Voenizdat, 1977, p 115.
7. "Sovetskay artilleriya v Velikoy...", p 505.
8. Ibid., pp 390, 392.
9. "Nastavleniye artillerii Krasnoy Armii. Pravila strelby nazemnoy artillerii 1945 g." [Red Army Artillery Manual. 1945 Firing Rules of Ground Artillery], Moscow, Voenizdat, 1946, p 193.
10. "Sovetskaya artilleriya v Velikoy...", p 546.

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## ON THE QUESTION OF STRATEGIC OPERATIONS OF GREAT PATRIOTIC WAR 1941-1945

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[Article by Maj Gen A. I. Mikhalev and Col V. I. Kudryashov published under the rubric "Debate"; the article is a response to the article by V. V. Gurkin and M. I. Golovnin "On the Question of the Strategic Operations of the Great Patriotic War of 1941-1945" published in VOYENNO-ISTORICHESKIY ZHURNAL, No 10, 1985, pp 10-23]

[Text] In the military history works and periodicals there has come to be a definite unity of views and concepts in classifying the strategic offensive operations of the Great Patriotic War. The greatest differences of opinion are encountered in determining the strategic defensive operations. In this context it seems advisable to us to clarify the criteria and the method of approach on the basis of which one or another defensive operation might be considered as strategic.

The experience of the first defensive engagements of the Great Patriotic War has shown that the forces of a single front were clearly insufficient for carrying out strategic tasks on the defensive under the conditions of the enormous scope of the hostilities. For this reason, as a rule, a strategic defense began to be conducted in the form of defensive operations by groups of fronts and carried out according to a single concept and plan under the leadership of the Supreme High Command (the high command of a sector) with the employment of the field forces and formations of the other Armed Services. The aims of such operations were the checking of advance of large enemy groupings (usually army groups), the causing of significant damage to them, the holding of strategically important areas (lines) and the establishing of conditions for going over to a counteroffensive. Hq SHC took the decision to conduct a strategic defensive operation and on the basis of this the appropriate planning was carried out, tasks were set for the fronts, the grouping of troops (including the use of strategic reserves) and their operational configuration, the system of defensive lines (areas), positions and man-made obstacles were established.(1)

Considering these factors, let us analyze the combat operations of troops on the Southwestern Sector during the initial period of the war.

As is known, the Soviet Command did not plan to conduct a strategic defensive operation here to repel the aggressor's invasion. The state frontier was to be protected by the forces of the first echelon rifle corps. The army second echelons and primarily the mechanized corps were to launch counterstrikes and develop the offensive. The strategic goals were to be achieved by the going over of the troops of the fronts to a decisive offensive.

From the very outset of the war, our command adhered to precisely such a plan. For example, the directive of the People's Commissar of Defense of 22 June 1941 demanded that the Southwestern Front "by concentric strikes...destroy the enemy grouping...and by the end of 24 June capture the area of Lublin...."(2) Even on 26 June, Headquarters prohibited the retreat of the troops and ordered the continuation of counterstrikes. Army Gen G. K. Zhukov insisted on the continuation of the offensive all the time that he was on the Southwestern Front. Only on 30 June 1941 did Headquarters take the decision to pull back the troops of the Southwestern Front and portions of the forces of the Southern Front (the 18th Army) to the line of fortified areas.

In this context the aggregate of combat operations of the Southwestern and Southern Fronts over the period from 22 through 30 June 1941 was incorrectly defined as a strategic defensive operation. The decision for a strategic defensive was not taken by Headquarters and the corresponding troop grouping and system of defensive lines were not established. Only the Southern Front (the 9th Army) received the mission for the defensive. For this reason, the fighting of the Southwestern Front during the designated period must be classified as a border engagement in the course of which both sides endeavored to achieve the set goals by an offensive.

In analyzing the Directive of Headquarters to the Southwestern and Southern Fronts of 30 June 1941, we would conclude that it actually envisaged a transition to a strategic defensive on the Southwestern Sector under the conditions of the unfavorably developing situation and a sharp change in the balance of forces in favor of the enemy as a result of its launching of preventive attack and the capturing of the initiative. The defensive actions by our troops from this time on assumed the form and content of a strategic defensive operation which was carried out against Army Group South according to a plan and under the leadership of Headquarters and from 12 July, under the direct command of the commander-in-chief of the Southwestern Sector. The initial decision was taken by Headquarters for 10-15 days of fighting (from 30 June through 10-15 July). Subsequently (from 15 July through 19 August) changes and clarifications were incorporated in the operation's plan by Headquarters and by the commander-in-chief in accord with the developing situation. Defensive tasks were set simultaneously for two fronts (Southwestern and Southern) and for the Black Sea Fleet, the troop grouping, the system of defensive lines and the time for their occupying by the troops were set. On 7 July, Headquarters took the decision to prepare two rear defensive lines (including the second along the east bank of the Dnieper). The width of the defensive zone reached 500-800 km and the depth of the defenses in the course of the operation was 400-100 km. The operational configuration of the Southwestern Sector was single-echelon. In the reserve of the commander-in-chief there were from six to ten divisions.

The troops of the fronts by a stubborn defensive on the main and intermediate lines and by the carrying out of counterattacks and counterstrikes checked the advance of the enemy groupings, causing them significant losses. The main efforts were focused on the holding of Kiev. The decision to occupy the rear strategic line along the eastern bank of the Dnieper was taken by Headquarters on 19 August. By 15 August, the armies of the Southwestern and Southern Fronts had completed the pullback of the troops to this line.

With the retreat of the Southwestern and Southern Fronts to the eastern bank of the Dnieper, a short pause arose in the fighting on the Southwestern Sector and this was caused by the need to replenish the heavy casualties suffered by Army Group South and by the carrying out of a regrouping of the Nazi troops for a further offensive.

Thus, the fighting of the Southwestern and Southern Fronts over the period from 30 June through 25 August 1941 represented the first strategic defensive operation by the troops of the Southwestern Sector and carried out in cooperation with the Black Sea Fleet in the aim of checking the advance of Army Group South, to carry out the planned retreat of the troops to the line of the fortified areas as well as the intermediate and rear defensive lines, to defeat the assault grouping of Nazi troops and prevent the capture of Kiev as well as the other important industrial and administrative centers of the Right Bank Ukraine.

In viewing the subsequent fighting of the Southwestern and Southern Fronts on this level and on analyzing the directives of Headquarters of 19 and 23 August 1941, it can be concluded that these were actually the decision for a second strategic defensive operation carried out by the troops of the Southwestern Sector in the aim by a stubborn defensive on the prepared lines to defeat the troops of Army Group South and prevent the capture of Kiev, the Left Bank Ukraine and the Donbass. These directives set the tasks for the fronts, the troop grouping and the operational configuration and the system of defensive lines. Subsequently, in the course of the operation, Headquarters and the commander-in-chief designated new defensive lines and adjusted the missions for the troops depending upon the developing situation.

A distinguishing feature of the second strategic defensive operation by the troops of the Southwestern Sector was its carrying out simultaneously against two strategic field forces of Nazi troops, the Army Group South and a portion of the forces from the Army Group Center (the 2d Tank Group and 2d Field Army).

It would be possible to extend the analysis of this operation as well as examine subsequent ones but, in our opinion, there is no need for this, since such a method of approach is acceptable for classifying the strategic defensive operations both on the Southwestern as well as on the Western and Northwestern Sectors. Such a method will make it possible to have a correct approach to determining the number of strategic operations conducted by the Soviet Armed Forces during the Great Patriotic War.

#### FOOTNOTES

1. See: "Voyenny Entsiklopedicheskiy slovar" [Military Encyclopedic Dictionary], Moscow, Voenizdat, 1983, pp 497-498, 516.
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## DEVELOPMENT OF AIR DEFENSE WEAPONS AND EXPERIENCE OF THEIR EMPLOYMENT IN LOCAL WARS

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[Article by Candidate of Military Sciences, Professor, Col Gen V. K. Strelnikov published under the rubric "Local Wars"]

[Text] Since the end of World War II, there has not been a single year when the imperialist states did not conduct predatory wars in one or another region of the world.

In starting local wars, the aggressors pursue not only political aims. In these wars, they test out new weapons and military equipment and work out the methods of their combat employment in different situations. In all local wars aviation has been widely employed. With the development of combat, the amount of aviation has increased and the scale of employment and activity have risen. Thus, while prior to the attack on North Korea by the summer of 1950, the United States had concentrated 657 combat aircraft at nearby airfields, by the autumn of 1951 their number had risen to 1,441 and by the end of the war, to 2,400 which was 35 percent of all the U.S. Air Force.(1) These planes carried out more than 104,000 aircraft sorties, dropping around 700,000 tons of bombs.(2)

The increase in aviation forces was even more significant in Vietnam. By the start of the aggression (1964), there were around 1,000 airplanes and helicopters at U.S. bases and on U.S. carriers in the combat area. Three years later, there were 4,400 of them.(3) Around 8 million tons of bombs and other ammunition were dropped on the earth of long-suffering Vietnam, that is, almost 3-fold more than were expended by American pilots over the years of World War II in all theaters of operations.(4)

The aggressor nations have also made massed use of aviation in the Near East. For example, by the start of the 1973 October War the Israeli Air Force had 488 combat aircraft, including over 100 Phantom fighter bombers and around 160 Skyhawk fighter bombers.(5)

The limited number of air defense weapons in the states which were the victims of aggression did not provide a cover against air strikes even against the

most important objectives on the battlefield and in the rear and initially air defense did not represent a major threat to the aviation of the aggressors. Subsequently, regardless of the quantitative growth of the defensive weapons, the aggressor air forces continued to carry out the missions assigned to them almost completely, although with significantly greater tension and losses. Their operations could be impeded only by a qualitative improvement in all air defense weapons.

Until the mid-1960's aviation played the main role in the air defense system. It was the most maneuverable and powerful weapon. Its capabilities were further increased by the delivery of jet aircraft. The significantly increased rate of climb and speed of flight of the fighters increased the probability of intercepting the aggressor bombers at the distant approaches to the defended objectives and made it possible to quickly concentrate the necessary interceptor forces on the threatened sector.

During the war in Korea, the Soviet produced MIG-15 jet aircraft were successfully employed for carrying out air defense missions. In terms of their performance they were not inferior to the U.S. fighters and fighter bombers. However, combat experience showed that for successfully carrying out the posed missions, the interceptor fighters in terms of their performance should surpass the air attack weapons. What was needed was jet supersonic all-weather aircraft armed with cannons and guided air-to-air missiles capable of destroying the enemy in a broad range of altitudes.

It was pointed out in the foreign press that with the delivery of the MIG-17 and MIG-21 jet fighters to the North Vietnamese air defenses, the effectiveness of fighter operations increased significantly. The navigation equipment, radar sights and weapons carried by the aircraft made it possible to employ them in any time of the day and under any meteorological conditions. The North Vietnamese pilots skillfully employed the high performance of the Soviet-produced aircraft and made evermore tangible attacks against the air enemy.

One of the reasons for the unsuccessful air combat of American pilots in Vietnam, as foreign specialists feel, was the incorrect assessment of the combat capabilities of the North Vietnamese fighters. At the start of the war, the leaders of the U.S. Air Force said a great deal about the "weak fighter aviation" of Vietnam, the "shortcomings of the MIG fighters" and the "tactical backwardness of the flight personnel." (6) But the capabilities of the F-105 and F-4C fighters were exaggerated by them. However, by the end of the war American pilots were forced to recognize that the MIG aircraft were extremely effective in interception, they had good air-to-air missiles while the North Vietnamese pilots were disciplined and possessed sufficient skill. (7)

In analyzing the experience of air operations in Vietnam and in the Near East, foreign military specialists have pointed out that in a majority of instances, fluid group battles broke out in repelling the air raids. Under such conditions not speed but rather maneuverability became the important characteristic of the fighter and this was noticeably increased with the appearance of a variable-geometry aircraft in the air defense fighter aviation. This made it possible to substantially improve the take-off and

landing performance, widen the range of tolerable stresses under different flight conditions, to significantly reduce the time of climbing, the time and radius of turns, to increase the tactical radius by 12 percent and the duration of air patrolling by 15 percent (in comparison with the fixed-wing fighters).

The air defense fighter aviation combated the air targets by two methods: from a status of ground alert and by patrolling in the area of the covered objectives.

The repelling of massed strikes by large aggressor air forces was particularly difficult. In such instances the fighter aviation, as was shown by the experience of the war in Korea, also switched to massed operations. For carrying out a mission several different-purpose groups were assigned simultaneously: a forward one for intercepting the enemy air cover forces; a strike group for destroying the bombers and tactical fighters traveling toward the objectives of the attack; a cover group for supporting the actions of its own main forces; "free-lancers" for destroying enemy aircraft on the return route; a strong reserve for increasing the efforts, for carrying out suddenly arising missions as well as for covering fighters in disengagement and landing.

With a shortage of forces the air defense fighters operated in small groups using the "free-lance" method. If possible, they made a surprise attack on the enemy and immediately disengaged at maximum speed. Such tactics was widely employed in the war in Vietnam. As was pointed out by the Commissar of the North Vietnamese Air Defense Troops, Maj Gen Nguyen Suan Mau, this made it possible for the fighter pilots together with the ground combat crews to destroy 2,341 American aircraft in the North Vietnamese skies.(8)

In subsequent years, in line with the improvement of the ground air defense weapons and the significantly increased effectiveness of their employment, the aggressor aviation was forced to repeatedly alter the methods of making air strikes. This was immediately reflected in the operations of the fighter interceptors. In accord with the developing conditions, the composition of their groups changed from a pair or one or two flights (the concluding stage of the Vietnamese War and the 1967 Arab-Israeli War) to three or four flights and more (the Israeli War against Egypt and Syria in October 1973).

The sharply increased capability of the air attack weapons to hit various objectives required the development of new, more effective and reliable means of combating them capable of operating independently of the time of day and the weather. These were the surface-to-air missiles (SAM). These appeared in the air defense system of North Vietnam in July 1965. In their very first battle they downed three F-4 Phantom aircraft.

The U.S. press pointed out that from this moment air warfare entered a new phase. American pilots began to fear flying in areas where they assumed SAM positions could be. The losses of the U.S. Air Force increased sharply. Thus, while over the first half of 1965, around 400 enemy aircraft were downed over North Vietnam, in just one month from the introduction of the SAM (26 July-29 August), the figure was over 100.(9)



The North Vietnamese antiaircraft missile troops comprised the basis of the nation's air defenses and they increased the capabilities of destroying the high-speed and high-altitude targets as well as the effective cover of the major centers and lines of communications in North Vietnam. According to the estimate of American military specialists, the North Vietnamese air defense system was the most advanced of all which the U.S. Air Force had encountered. According to the bitter estimates of the Pentagon, the losses of the American Air Force in North Vietnam exceeded all expectations. In 1965 alone, wrote the magazine U.S. NEWS AND WORLD REPORT, they cost the United States 1 billion dollars and the daily loss was several aircraft.(10)

Under these conditions, the aggressor was forced to seek out vulnerable points in the air defense system and employ new methods for overcoming it. The Americans switched to wave operations in small groups in dispersed battle formations at low and maximum low altitudes and began to widely employ evasive maneuvers, ECM equipment and antiradar missiles of the Shrike class. They increased the number of support groups and reduced the number of aircraft in the strike forces.

However, regardless of this, the SAM continued to successfully combat the air targets. Their high combat effectiveness was confirmed in later local wars in the Near East. By the start of the 1973 Arab-Israeli War, Egypt, for example, had a powerful air defense grouping which covered the major objectives in the rear and the troop groupings; the system was echeloned along the front and in depth. It now included different types of SAM. They made it possible to destroy high-speed air targets in a broad range of altitudes and possessed high firing accuracy under the conditions of the wide employment of electronic combat equipment. The portable SAM were a good means of combating low altitude aircraft. Their autonomy, range and simplicity in use were complemented by rather high effectiveness. In the course of the war Israel lost around 120 aircraft, approximately 80 percent of which were downed by antiaircraft missiles and antiaircraft artillery fire during the first 3 days of military operations.(11)

With a shortage of SAM, as was the case in Vietnam until mid-1966, the basic method of their employment was wide fluid actions from ambushes on the probable routes of flight of the aviation. For this reason, they were not used even for the defense of major national installations. With an increased number of missiles, the antiaircraft missile troops switched initially to a stationary object cover and then a regional one. Along with this installation defenses and actions of small subunits from ambushes (roaming SAM) continued to occur.

The use of single-type SAM groupings made it possible for the aggressor to quickly adapt to their configurations and to spot strong and weak points in the equipment and develop tactics which reduced the effectiveness of counteractions. For this reason, subsequently mixed groups of different types of SAM began to be established. They complemented one another and provided a mutual fire cover. Often they also included antiaircraft artillery which was an effective means for combating low-altitude targets.

The antiaircraft artillery, in the opinion of foreign specialists, in local wars was the second most important type of air defense troops (prior to the appearance of the SAM). Along with the fighter aviation, it covered the troop groupings, airfields, the most important administrative and industrial centers, the centers of communications and hydraulic power works. Antiaircraft artillery was the most numerous air defense weapon in Korea and Vietnam (up to 1965). In the Anglo-Argentine conflict it was the basis of the air defense. It included antiaircraft guns of small, medium and large caliber and which evidenced high effectiveness. For example, in the war in Korea, the U.S. Air Force just in 1950-1951 lost around 1,000 aircraft, including 676 from antiaircraft artillery fire.(12) In Indochina the antiaircraft artillery was responsible for more than 80 percent of the downed American aircraft and helicopters.

The small-caliber antiaircraft artillery holds a special place in this type of artillery. Its automatic guns, in being marked by maintenance simplicity and high reliability, proved effective in the combating of low-altitude targets. Their high combat effectiveness can be seen from the following fact: American aviation, in operating at low altitudes, lost 393 aircraft in Vietnam from January through July 1966, and 374 of these were destroyed by the fire of small-caliber antiaircraft artillery and antiaircraft machine guns.

Success in combating high-speed, low-flying targets was achieved with high fire densities. For solving this problem, multibarrel (twin, triple and quadruple) rapid-fire antiaircraft artillery mounts were developed and these, as a rule, were mounted on a self-propelled chassis. This made it possible to significantly increase the fire productivity and mobility of the small-caliber antiaircraft artillery. The establishing of its numerous and large groupings forced the American pilots to increase the flight altitude. However, the loss level here increased even further, as the aviation began operating in zones of effective counteraction by the enemy aircraft complexes and fighter aviation.

Somewhat later the antiaircraft artillery began receiving antiaircraft cannons of medium and large caliber making it possible to combat the air enemy at medium and high altitudes. The sufficient firing accuracy was ensured by developing an antiaircraft artillery complex which included the gun, the antiaircraft fire control mechanism and a gun laying radar. The effectiveness of the shells was increased by mounting on them simultaneously time mechanical fuzes and radio fuzes.

The methods of carrying out the antiaircraft artillery missions, as has been pointed out in the foreign press, depended largely upon the quantitative and qualitative strength of the artillery. With a shortage of forces, antiaircraft artillery fought in small maneuverable groups from ambushes on the most probable directions of the enemy aviation flights and with a sufficient amount of forces switched to the stationary coverage of the most important installations on the battlefield and in the nation's rear.

The combat experience persuasively has shown that the effective combating of air targets was largely determined by the reliable functioning of the electronic equipment of the air defense system. This equipment was based upon various types of radars: detection, for providing all levels of command posts

with information on the air situation, SAM and antiaircraft artillery target designation and fighter interceptor guidance. They made it possible at significant ranges (depending upon the height of flight) to detect and track any air targets.

With the switch of the aggressor aviation to operations at low and maximum-low altitudes, the capability of the radars to warn the air defense weapons of an attack declined sharply. This substantially increased the response time of the SAM, the antiaircraft artillery and fighter aviation to repel the air raids. However, soon thereafter the troops began receiving low-altitude radars capable of detecting and tracking air targets against the background of the terrain clutter. In the aim of increasing their range, they were deployed if possible at positions with minimal screening angles and their antenna systems were set up on prevailing heights or on specially built towers. Moreover, all the electronic equipment of the antiaircraft missile units, the antiaircraft artillery and the fighter aviation were employed in carrying out the detection task. Such a measure made it possible to establish a radar field with a multiple overlap on all altitudes and ensured the detection of the airborne targets at the maximum possible ranges and with a sufficient time reserve for transmitting the warning information to the command posts and the firing subunits. The extensive employment of electronic equipment sharply increased the effectiveness of the air defense actions and forced the aggressors to allocate significant resources for combating them.

Thus, in the course of local wars the development of air defense weapons, in the assessment of foreign military specialists, occurred in the following basic areas: fighter aviation -- the development of specific-purpose aircraft for conducting maneuvering air combat and for carrying out a distant interception, the equipping of the interceptor fighters with powerful missile and cannon weapons and advanced sight and navigation equipment; the SAM -- the development of different-purpose installations (close action, short and medium range), increasing the firing accuracy under the conditions of the enemy's employment of countermeasures (electronic countermeasures, low and maximum-low altitudes and evasive action); antiaircraft artillery -- the increase in the caliber, the muzzle velocity of the shells and the rate of fire of the antiaircraft guns, the development of antiaircraft artillery systems, increased accuracy of firing and mobility; the radio-technical troops -- increased detection range of various classes of air targets, increased accuracy in determining their coordinates, resistance to jamming and reliability under extended operating conditions. Increased effectiveness of the combating of air attack weapons by the air defense weapons has been the result of their development. This has had a substantial influence on air tactics.

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## COLLAPSE OF NAZI BARBAROSSA PLAN

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[Article by Candidate of Historical Sciences, Maj Gen N. K. Glazunov published under the rubric "Against the Bourgeois Falsifiers of History"]

[Text] The Great Patriotic War was the largest armed clash with the shock forces of world imperialism, the severest of all wars in world history and one of the major testings which our motherland has ever experienced. This war determined the destiny of the world's first socialist state and the future of world civilization, progress and democracy.

Even before the attack on the USSR, the Nazi militaristic states by force of arms had established their domination over almost all the countries of Europe, having defeated and taken them in lightning campaigns. In Western Europe, there was virtually not a single state capable of fighting Germany and its allies in aggression. But Great Britain and the United States continued to hold vacillating positions, judging their policy and strategy against the actions of the states in the Nazi-militaristic bloc. Moreover, with all their might they endeavored to direct the aggressive aspirations of Germany against the USSR and thereby weaken Germany as a dangerous competitor on the world scene.

The next military political goal in the plans of Nazi Germany was to destroy its main opponent, the Soviet Union. This reactionary, criminal idea was embodied in the Barbarossa Plan(1) the realization of which would make it possible for Germany and its allies in the Nazi-militaristic bloc to eliminate the main obstacle on the path to world domination and to capturing and subordinating the countries of Asia, Africa and America. Such an evil plan included an entire range of military-political and economic documents containing the goals and tasks for not only a military attack by Germany on the USSR and the capturing of its territory but also the eliminating of the social and state system, all the socialist principles, the ideology and democratic rights of the Soviet people with a significant physical extermination of the population. The Soviet state was to be split up and completely eliminated and on its territory four German colonial provinces or Reichskommissariats, were to be established: "Ostland," "Ukraine," "Moscow" and "Caucasus," under the administration of an eastern ministry.

The overall concept of the Barbarossa Plan was to split the front of the main forces of the Russian army concentrated in the western part of Russia, by rapid and deep thrusts of powerful mobile groupings to the north and south of the Pripyat swamps and, using this breakthrough, to destroy the isolated groupings of enemy troops. The retreat of battleworthy enemy troops, the plan emphasized, into the broad expanses of Russian territory should be prevented. During the first, decisive stage the forces of Army Group Center were to destroy our troops in Belorussia; Army Group North was to defeat the defending troops in the Baltic and take Leningrad; Army Group South was given the task of destroying the grouping of Soviet troops in the Ukraine, depriving it of the possibility of retreating behind the Dnieper. In the course of further pursuit, the plan was to quickly reach Moscow on the central axis, and in the south to capture the economically important Donbass. (2)

The plan was aimed at the "unexpectedly rapid collapse of Russian resistance" and the achieving of the ultimate goal of establishing a "protective barrier against Asiatic Russia along the general line of Volga--Arkhangelsk." Aviation was to paralyze the "last industrial region remaining for the Russians in the Urals." Very short times, within a range of from 3 to 17 weeks, were assigned to carry out the plan so as to capture Moscow at the latest by 7 November 1941.

In the West, military historians have repeatedly endeavored to represent the Barbarossa Plan as the product of a dilettante Hitler's fantasy. This was far from the case. Involved in working out the plan were the most experienced General Staff officers such as Gen von Paulus, Marx, Jodl, Halder, the senior officers of the General Staff Lossberg, Sodenstern and others. Even in the second half of 1940, in deepest secrecy they had drawn up several versions of the attack and course of the war in the East.

The Barbarossa Plan was published in the top secret Directive No. 21 signed by Hitler on 18 December 1940, that is, 6 months prior to the treacherous attack on the Soviet Union, under the conditions of the existence of a nonaggression pact concluded between both states upon the initiative of Nazi Germany on 23 August 1939. The directive directed the commanders-in-chief to the fact that "the German armed forces should be ready to defeat Soviet Russia in the course of a brief campaign even before the war is completed against England." (3)

By the summer of 1941, the Nazi Command had completed the strategic deployment of troops along the western frontiers of the USSR. Some 190 divisions were concentrated here for the attack, including 153 German and 37 satellite divisions. Their total strength was 5.5 million men. The weapons included 47,200 guns and mortars, 4,300 tanks and assault guns and 4,980 combat aircraft. All these forces were organized into 12 armies: 8 German, 2 Romanian and 2 Finnish and 4 German tank groups which comprised the 3 Army Groups North, Center and South. (4)

The grouping of forces was established so as to launch the first powerful thrust against Soviet troops on three strategic axes: northern, central and southern. All the German armies were deployed in a single line, each in one

echelon. Those armies which had to advance in the common zone with the tank groups had a double-echelon configuration.

The adventuristic nature of the Nazi plan was obvious. It exaggerated the political, economic and military capabilities of Nazi Germany and its allies. The Nazis showed a complete miscomprehension of the essence and nature of the socialist system and its greatest capabilities. They underestimated the strength of the new socialist ideology, the moral-political unity of Soviet society and the unbreakable friendship of the Soviet peoples. One of the failings of Nazi strategy was also the underestimating of the Soviet army's might which led the Nazi leadership to an incorrect determining of the nature of the war, to a miscalculation in the required forces, means and times for conducting military operations and to an ignoring of the operations and to an ignoring of the role of strategic reserves and the space or distance factor.

Considering the looming danger of an attack by the imperialist forces, the Communist Party and the Soviet government initiated the necessary measures to strengthen the nation's defense capability. Important measures were carried out aimed at reorganizing the operation of industry and transport. In a short period of time new enterprises were created and the existing ones were rapidly expanded. New models of weapons and military equipment were developed and introduced. Organizational measures were carried out in the Army and Navy. The system for training military personnel was reorganized. Allocations for military needs were increased. The nation's population and the personnel of the Armed Forces were indoctrinated in a spirit of readiness to properly rebuff any aggressor.

The repelling of Nazi aggression was entrusted to the troops of the Leningrad, Special Western, Special Baltic, Special Kiev and Odessa Military Districts which included 170 divisions and 2 brigades numbering 2,680,000 men, 37,500 guns and mortars (not including 50-mm), 1,475 tanks (KV and T-34), 1,540 combat aircraft of new types as well as a significant amount of obsolete types of military equipment.<sup>(5)</sup> However, it was impossible to fully complete the preparing of the nation for war and the reorganizing of the Armed Forces as had been planned.

As a result of the treacherous attack by superior forces which had been deployed ahead of time for military operations, the German troops on the first day of the war succeeded in pushing to a depth of 35 km and in places to 50 km. The hurriedly organized defenses, in the absence of a solid front, was unstable. Over the first week the Nazis reached the Western Dvina in the northwest and Minsk on the western sector, they captured a large portion of Belorussia and were pushing toward the Dnieper.

The Soviet Armed Forces were forced to go over to the strategic defensive along the entire front. In realizing perfectly that the enemy was wagering chiefly on a blitzkrieg, the Soviet High Command made every effort to check the advance of the enemy troops in the nation's interior, to cause them maximum losses, to prevent the rapid capture of economically important areas, to evacuate industrial enterprises to the east and at whatever cost keep the material and technical base for the deployment of the Armed Forces and for the further conduct of the war.



Proceeding from this, the Soviet Army was given the task of defending stubbornly and fighting for each inch of Soviet land. The defensive actions by the troops were to be of an active sort in order by counterattacking the flanks of the most dangerous enemy groupings and acting against their rear, to force the Nazis to dissipate their forces, to change the axes of the strikes and thereby slow up their advance. The entire Soviet people rose to fight the aggressors. At their head stood the Communist Party. It inspired and ideologically armed the Soviet people and organized them to defend the socialist fatherland. The program for fighting Nazi Germany was set out in the Directive of the USSR SNK [Council of People's Commissars] and the VKP(b) [All-Union Communist Party (Bolshevik)] Central Committee of 29 June 1941 which demanded that the party organizations subordinate all the resources to the interests of waging the war, to reorganize the activities of the Soviet rear and all ideological and political work, to convert the national economy to a wartime footing, to strengthen the Armed Forces in every possible way and initiate a partisan movement in the enemy rear.

For directing the mobilization of all the nation's forces to fight the invaders, the Presidium of the USSR Supreme Soviet, the VKP(b) Central Committee and the USSR SNK on 30 June formed the State Defense Committee [GKO]. I. V. Stalin became its chairman. All authority in the state was concentrated in the hands of the GKO. For directing the Armed Forces by the Decree of the USSR SNK and the VKP(b) Central Committee of 23 July, Headquarters of the High Command was established, on 10 July it was transformed into the Headquarters of the Supreme Command and on 8 August, into the Headquarters of the Supreme High Command. Other changes were carried out in the central government apparatus aimed at improving the leadership of the Armed Forces, their organizational development and support.

In resolving the questions of organizing the armed struggle against the invaders, the Communist Party gave particular attention to strengthening party influence in the Armed Forces, to improving troop morale and increasing the level of party political work in the Army and Navy. The effective work carried out by the party and state bodies ensured the induction into the army of 5.3 million men under the mobilization during the first 8 days of the war.

At the beginning of July 1941, the VKP(b) Central Committee supported the patriotic movement of the Leningrad and Moscow population for establishing units and formations of people's militia to aid the front. By 7 July, 12 divisions had been organized in Moscow and the oblast, 10 divisions and 14 separate artillery-machine gun battalions in Leningrad with a total number of 255,000 men. The Communist Party was also the organizer of the struggle of the Soviet people in the rear of the Nazi occupiers. In 1941, on the temporarily occupied territory work was started by 18 underground obkoms, more than 260 district committees, gorkoms, raykoms and other party bodies and more than 2,000 partisan detachments were operating with a membership over 90,000 persons.(6) The aggressor which planned on encountering resistance only from the Red Army on Soviet land actually collided with a nationwide struggle against the Nazi occupiers.

As a result of the measures undertaken, the offensive by the Nazi troops in the Baltic, on the Kiev and Leningrad axes by mid-July had ground to a halt and on the central sector with the committing of the second strategic echelon the enemy was tied down in protracted fighting in the Smolensk area. The plans of the Nazis that the reaching of the Dnieper would accelerate the end of the war did not come about. Even during this period the unrealisticness and complete adventurism of the Nazi Command plans became apparent. The Barbarossa Plan which was based upon the idea of a lightning defeat of the USSR was showing signs of collapse.

The hostilities reached a high pitch on the approaches to Leningrad, in the Arctic and Karelia and on the southern wing of the Soviet-German Front. But during the first months of the war the Smolensk Battle was the largest and this involved the troops of four fronts: Western, Reserve, Central and Bryansk. The result of this was the abandonment by the German General Staff of a non-stop drive against Moscow. Here for the first time the falaciousness of the blitzkrieg strategy became apparent and the expansionistic underpinnings of the Barbarossa Plan were seriously shaken.

Regardless that the situation for the Soviet troops in the initial operations of the war went badly and they had to retreat to the east for a number of reasons abandoning territory to the enemy, the resistance stiffened from line to line. This could be seen from how the rate of advance of the Nazi troops dropped. While during the first three weeks of the war they advanced an average of 20-30 km a day, by mid-July through 7 August, this rate had dropped to 3.5-8.5 km and then until mid-September their progress became even slower. During the defensive against Moscow in October-November, the Nazi troops covered an average of 2.5-3 km a day. (7)

The combat losses of the Nazis in personnel and military equipment show the strength of the resistance of the Soviet troops, their skill and heroism. While from the start until mid-July the losses of the Nazi troops (according to the data of the Halder Diary) averaged approximately 4,000 men a day, during the period of the Battle of Smolensk in the regions of Vyazma and Yelnya as well as in the fight for Kiev they rose up to over 7,000 men. The losses of ground troops increased particularly in August 1941, reaching 227,800 men over a period of 26 days. On certain days of August (from 7 through 13) they were over 17,000 men a day. In the course of 5 months of continuous fighting the Wehrmacht ground troops alone lost over 750,000 men killed, wounded or missing in action; some 26 divisions and 13 brigades were completely destroyed and all the divisions from the OKH Reserve had been committed to battle. The German air losses from 22 June through 10 November were 5,180 aircraft. (8)

The stubborn checking of the aggressor lasted 5 months but it still was able to drive into our territory to a depth from 850 to 1,200 km, to blockade Leningrad, to come close to Moscow, and to capture a large portion of the Donbass and the Crimea. The Nazis occupied the Baltic, Belorussia, Moldavia, virtually all of the Ukraine, a portion of Karelia and a number of oblasts of the RSFSR. But, regardless of the significant advance of the Nazi troops, the enemy's basic goal of destroying the main forces of the Soviet Army in the border zone had not been achieved. The enemy was unable, as it had planned,

to check the mobilization of the Soviet Armed Forces, to disrupt troop command and disorganize our nation's rear. Time was gained for reorganizing the national economy to a wartime footing and for training new reserves.

During the third 10-day period of November 1941, the troops of the Southern Front in hard fighting were able to wrest the initiative from the enemy. As a result of the counteroffensive which commenced here, the enemy assault grouping was defeated and with heavy losses thrown back from Rostov to the west. In the course of the counteroffensive in the Tikhvin area, the Nazi troops were pushed back beyond the Volkhov. The front on the northwestern sector had been stabilized.

The strengthening of the situation on the flanks of the strategic front made it possible for the Soviet Supreme High Command to focus chief attention and efforts on repelling the offensive against Moscow. During the first days of December by counterstrikes of the 1st Assault Army, the 20th Army and a portion of the forces of the 16th Army the advance of the enemy grouping fighting to the north of Moscow was halted. Due to the active operations of the 50th Army reinforced by the II Cavalry Corps and the 112th Tank Division, succeeded in halting the enemy's advance to the south of Moscow. The battered assault groupings of Nazi troops had lost their offensive capability and were forced to go over to the defensive.

On 5 December, the Soviet troops commenced a counteroffensive at Moscow. This was the first offensive operation carried out by the forces of three fronts. In the course of it, the Soviet soldiers defeated the strongest enemy groupings threatening Moscow. The successes received by the Soviet Army fundamentally altered the situation on the entire Soviet-German Front. Having seized the strategic initiative on the crucial sector and in causing heavy losses to the enemy, the Soviet troops created good prerequisites for launching new attacks against the enemy and developing a general offensive.

In the course of the 1941-1942 winter campaign, the Soviet Armed Forces pushed the Nazi troops back some 150-400 km on various sectors of the front. Around 50 enemy divisions were destroyed. The ground troops alone lost 832,550 men.<sup>(9)</sup> The defeat of the Nazi troops at Moscow and on other sectors of the Soviet-German Front was the start of a fundamental turn in the war. The Nazi Barbarossa Plan had collapsed on all sectors.

The most important result of the fighting in the summer and autumn of 1941 and the winter of 1941-1942 campaigns was the thwarting of Hitler's plan for a blitzkrieg against the USSR by the Soviet Armed Forces and the eliminating of the threat of the spread of Nazi aggression to other countries. The blitzkrieg strategy which had been employed so effectively in Western Europe had failed in the struggle against the Soviet Union. Nazi Germany was confronted with the need to wage a protracted war for which it was unprepared. The myth was dispelled of the invincibility of the Nazi Army. The Wehrmacht troops had gone over to the defensive along the entire Soviet-German Front.

The lack of a second front in Europe made it possible for the Nazi Command in the summer of 1942 to again seize the strategic initiative and organize an offensive on the Stalingrad and Caucasian strategic sectors. Under the blows

of superior enemy forces, the Soviet troops retreated into the interior of the nation some 150-400 km, abandoning the eastern regions of the Donbass and the right bank of the Don. The Soviet Armed Forces, having shown courage, tenacity and mass heroism, checked the enemy's plan to take Stalingrad without a pause and caused it major losses in personnel and equipment. The Nazi plans to capture the Caucasus also came to naught. Regardless of the fact that the Nazi troops had captured a significant portion of Soviet territory, Nazi Germany at this stage of the hostilities had not achieved the set goals in the war against the USSR.

In the counteroffensive initiated at Stalingrad the troops of the Soviet Army surrounded and destroyed 22 Wehrmacht divisions and 160 separate units numbering 330,000 men, and defeated the Italian 8th Army and a portion of the forces of the 3d Romanian Army. The strategic initiative had finally shifted to the Soviet Armed Forces. This was the crucial stage in achieving a fundamental turning point not only in the Great Patriotic War but also in World War II as a whole and marked the beginning to the mass expulsion of the invaders from Soviet land. Hitler's Barbarossa Plan had suffered a final collapse. After the unsuccessful attempt by the Nazi Command to seize the initiative in July 1943, the Wehrmacht troops were forced to go over to the strategic defensive along the entire Soviet-German Front.

Thus, neither in 1941 nor in 1942 was Nazi Germany able to achieve the goals set in the war against the Soviet Union. Its political and military goals suffered a complete failure. On the Soviet-German Front which was the main front in World War II for the first time the Nazi troops suffered a major defeat.

Only our nation which possessed enormous territory and inexhaustible material and human resources could withstand such colossal strain in the struggle against the strongest armed forces of world imperialism. These capabilities were ably employed by the Communist Party for achieving victory over the enemy. The party united the Soviet people, having posed for them great liberating goals, it worked out and implemented a program for mobilizing all the nation's forces to wage war. Precisely due to the party's efforts, the Soviet people and their Armed Forces, regardless of the setbacks in the first months of the war and the capture of enormous territory by the enemy, were able not only to withstand the colossal force of the enemy's blow but also alter the course of the war in their favor and achieve victory over Nazism.

The victory of the Soviet Armed Forces at Moscow and Stalingrad was ensured primarily by the strength of the Soviet social and state system and by the historic capabilities residing in this system for mobilizing the enormous material and moral forces of socialist society to wage war. The unstinting labor of the Soviet people also became an important factor and under the difficult wartime conditions they forged the weapons of victory and supplied the Armed Forces with everything necessary for fighting.

The decisive conditions which contributed to the successful checking of the Nazi plan were: the increased art of the Soviet military leaders, the intense and effective work of the political bodies and party organizations and the heroic actions of the Soviet soldiers. The high moral of the men and the

commanders, their ardent Soviet patriotism, their hate for the enemy and the feeling of personal responsibility for the destiny of the socialist fatherland helped them surmount the difficulties and achieve the set goals.

#### FOOTNOTES

1. Hitler gave the name Barbarossa to the plan not long before the signing of Directive No. 21, having rejected the proposal of the Supreme High Command Staff of calling the plan Otto or Fritz. Only a name taken from remote German history and recalling the campaigns of conquest by Emperor Frederick I Barbarossa seemed worthy of the claims of the new pretender to world domination.
2. See: "Sovershenno sekretno! Tolko dlya komandovaniya" [Top Secret! For Command Eyes Only], Documents and Materials, Moscow, Nauka, 1967, p 152.
3. Quoted in the book: V. I. Dashichev, "Bankrotstvo strategii germanskogo fashizma. Istoricheskiye ocherki. Dokumenty i materialy" [Bankruptcy of the Strategy of German Naziism. Historical Essays. Documents and Materials], Vol 2, Aggression Against the USSR, the Collapse of the "Third Empire" of 1941-1945, Moscow, Nauka, 1973, p 86.
4. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945], Moscow, Voenizdat, Vol 4, 1975, pp 21-25.
5. Ibid., Vol 3, 1974, pp 435, 437, 438, 441; Vol 4, pp 21-27.
6. "Istoriya KPSS" [History of the CPSU], Moscow, Politizdat, Vol 5, Book 1, 1970, pp 182, 260, 264.
7. "Istoriya vtoroy mirovoy...", Vol 4, p 130.
8. Ibid.
9. Ibid., p 323.

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## GERMAN SUBMARINE OPERATIONS IN THE ATLANTIC

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[Article by Capt 1st Rank (Ret) B. S. Bannikov published under the rubric "Scientific Papers and Information"; the article has been written from the experience of World War II]

[Text] By the start of World War II, the German Navy had 57 submarines.(1) Of these, 49 were ready for combat employment, including 22 for operations in the Atlantic.(2) These forces were designed chiefly to disrupt the overseas enemy shipments. In addition, they were responsible for minelaying, for conducting reconnaissance and carrying out other missions, but for successfully doing this the German Navy clearly did not have enough submarines. The shipbuilding program adopted soon after the start of the war envisaged a significant increase in their number. Over the war 1,131 subs were built and commissioned.(3) The increased running speed, the greater supply of torpedoes, the greater range and the improved underwater performance (see the Table) largely predetermined the combat tactics of the commissioned submarines in carrying out the most diverse missions.

In the aim of interrupting or restricting overseas shipments the German submarines even before the start of the war were deployed on the routes of transports to the English shores and off the English Navy bases.(4) They operated by the station method. An individual submarine was assigned "quadrant stations" on the approaches to the bases, ports and on the junctions of the most important lines of communications. The stations had dimensions of approximately 10 miles along the perimeter and were used for the submarines as waiting areas for the enemy. The operating zones of the small subs were areas in the North Sea off the east coast of England, while for the large and medium subs, the western approaches to the British Isles on the most active lines of communications.

With the outbreak of the war and until the spring of 1940, the English Navy was unable to create any substantial hindrances for the German submarines. Subsequently, with the increase in the English ASW equipment, the German submarines had to change the combat stations more to seaward and they became significantly larger along the perimeter. Here the submarines no longer waited for targets but rather sought them out. Thus, the station method

developed into the cruising of individual subs initially in limited areas but as they were pushed further by the English ASW forces into the ocean, in extensive areas. Often they were not assigned any stations at all. In these instances, without having any demarcation lines between them, they maneuvered on the surface. In attacks on individual vessels the subs achieved much greater success than in operating against convoys. Thus, over the 4 months of the first year of the war, in operating against individual targets, they sank 110 English vessels.(5)

Large combat ships at times became the victims of German submarines. Thus, on 17 September 1939, the submarine U-29, which was on station to the southwest of Ireland, detected the patrolling English aircraft carrier "Courageous." Regardless of the fact that it was escorted by destroyers, the submarine was able to get off a successful attack. The success was aided by the skillful choice by the sub commander of a good moment for the torpedo attack which was made at the time that the "Courageous" was maneuvering to receive a landing aircraft. Having sustained serious damage, the carrier sank in 20 minutes.(6)

Having studied the German submarine tactics, the English changed the routes of the transports and introduced the convoy system and armed the vessels with artillery. It was difficult for the still small number of operating submarines to monitor the vast expanses individually and independently.

In working out new methods for the employment of submarines, the German Command concluded that their joint operations were necessary. Operations were halted against combat ships and this made it possible to concentrate the submarine forces for their group employment on the enemy sealanes. A submarine group (screen) of three-five units was formed up in a line perpendicular to the assumed convoy course and the search for this was carried out by reconnaissance aircraft. The screen itself was a sufficient distance away from the search area that upon receipt of the data from the reconnaissance aircraft the subs were able to deploy on the designated course.

Small groups possessed a low attack force and for this reason the results of their attack were poor. This increased only with a greater overall number of submarines in the German Navy and this made it possible to send up to 40 subs simultaneously on the active sealanes. Their number in the screens also rose (up to 15-20 units).

The German Command was able to conduct special operations with the group employment of submarines. A group (20-30 units) took up waiting stations a long distance off the English coast on the assumed routes of Allied convoys. The overall length of the screen area (300-400 miles) was chosen in such a manner as to compensate for the overall total errors (150-200 miles) permitted in conducting air reconnaissance. Thus, they ensured the passage of the detected convoy through the line of the screen, and the size of the intervals between the subs without fail ensured the detection of the convoy by one of them. This was also aided by the preliminary search carried out by reconnaissance aircraft. In benefiting from the slow speed of the convoy, the subs were able to attack it repeatedly from different directions. This scattered the enemy ASW forces and impeded their actions. Pursuit of the convoy at times lasted several days and from this it suffered significant



Table\*

## Main Specifications of Certain German Submarines

| No | Class           | Series             | Years built | Speed (max.) knots surface/submerged | diving depth, m | No. of torpedo tubes | torpedoes carried | range (in days) | Crew |
|----|-----------------|--------------------|-------------|--------------------------------------|-----------------|----------------------|-------------------|-----------------|------|
| 1  | small tonnage   | II-B               | 1935—1940   | $\frac{13}{7}$                       | 50              | 3                    | 6                 | 14              | 25   |
| 2  | same            | XXIII              | 1944—1945   | $\frac{9.7}{12.5}$                   | 100             | 2                    | 2                 | 10              | 14   |
| 3  | medium tonnage  | VII-C              | 1940—1945   | $\frac{17}{7.6}$                     | 100             | 5                    | 14                | 35              | 44   |
| 4  | large tonnage   | IX-C <sub>40</sub> | 1941—1944   | $\frac{18.3}{7.3}$                   | 100             | 6                    | 22                | 50              | 48   |
| 5  | cruiser         | IX-D <sub>2</sub>  | 1941—1944   | $\frac{19.2}{6.9}$                   | 100             | 6                    | 24                | 60              | 57   |
| 6  | same            | XXI                | 1944—1945   | $\frac{15.5}{17.5}$                  | 135             | 6                    | 22                | 100             | 57   |
| 7  | torpedo carrier | VII-F              | 1943        | $\frac{16.9}{7.9}$                   | 100             | 4                    | 39                |                 | 45   |
| 8  | tanker          | XIV                | 1941—1943   | $\frac{14.4}{6.2}$                   | 100             | —                    | 4                 |                 | 53   |

\* The table was compiled from the data of: A. M. Gakkel, A. N. Zamchalov, K. V. Penzin, "Istoriya voyenno-morskogo iskusstva" [The History of Naval Art], Leningrad, Izd-vo VMA, 1980; A. P. Rusanovich, N. A. Chkalov, "Boyevye deystviya podvodnykh lodok v period pervoy i vtoroy mirovykh voyn" [Combat Operations of Submarines During the Period of the First and Second World Wars], Moscow, Izd-vo GSh VMF, 1972; L. M. Yermeyev, A. P. Shergin, op. cit. [see Footnote 2]; G. Busch, op cit. [see Footnote 1].

losses. Here the subs often employed such a tactical strategem as breaking inside the convoy thereby limiting the retaliatory actions of the escort ships.

The maneuverable group employment of the submarines in mobile controllable screens was named pack tactics ("wolf pack"). This method developed finally by the autumn of 1941 when the number of submarines in the German Navy reached almost 200 units.(7)

From the end of 1941, individual German submarines began operating on the coastal sealanes of North America and with the entry of the United States into the war, also in the Gulf of Mexico and the Caribbean Sea. In the second half of 1942, pressed by the ASW forces away from the American coasts out to sea, they intensified their actions in the Central Atlantic. By this time the number of German subs had increased and by the end of December was 386 units.(8) As an average in 1942, 85-90 subs were at sea simultaneously. Such a number made it possible for them to deploy on the convoy routes in two screens, reconnaissance and attack.

In 1943, the major setbacks on the Soviet-German Front forced the Nazi Command to send major naval forces against the USSR. This provided an opportunity for the English and the Americans to significantly strengthen their ASW defenses and thereby sharply reduce the effectiveness of German submarine operations. Thus, from September 1943 through May 1944, of the 27 German submarines which crossed the Straits of Gibraltar, 7 were sunk and 6 were forced to return to base.(9)

In the autumn of 1943, certain changes occurred in the methods of employing the submarines. Instead of one large (attack) screen extended along the front, three or four small screens were established deployed on the convoy route at a distance apart equaling approximately the daily distance covered by the convoy. The search was entrusted to aviation and from its data the submarines converged on the convoy vessels.

During the first months of 1944, the German submarines operated chiefly in the North Atlantic and partially in the Equitorial. During this period, individual submarines were used evermore frequently. They were sent into the coastal waters of England, the United States and Canada. As a result of the Allied landing on Normandy (June 1944) the German submarines were deprived of their bases in France. Now they had to break through strong antisubmarine barriers from bases in the North Sea. In operating individually, they concentrated their efforts on the approaches to the English coast. The attacks were made in daytime from a surface position. The anticonvoy operations became a rare phenomenon.

In 1945, in individual operations the submarines began to employ ambush tactics. In lying on the bottom, they waited for the appearance of a target and attacked it according to the underwater listening device data. At the same time, super-small submarines began to be employed. These were employed in the coastal area between the mouths of the Thames and Scheldt Rivers as well as in the English Channel.(10)

German submarines were widely employed for minelaying, creating a threat to enemy navigation. Mines were a particularly effective weapon against merchant vessels in the Atlantic Theater in 1939-1940. The insufficient organization of ASW at this time made it possible to lay mines on the approaches to bases and ports, in narrows and on the junctions of coastal sealanes almost with impunity. The use of influence (magnetic and magnetic-acoustical) mines produced a great effect and these were set in previously reconnoitered coastal channels. In contrast to a torpedo attack which was coordinated in time with the passage of the enemy ships and vessels, that is, carried out at a time when the ASW equipment was in combat readiness, the laying of mines could be done at the safest time. For carrying out this mission, virtually all types of submarines were employed. In 1942, submarine minelayers were commissioned and these set 795 mines (39 percent of the total number).(11) The active minelaying operations of the German subs restricted the freedom of movement of the convoys in the English coastal sealanes and impeded the deployment of the English surface forces.

In the German Navy particular attention was given to the reconnaissance support of submarine operations. But it also happened that the subs were forced themselves to conduct reconnaissance. For example, with the preparing of the attack by Nazi Germany on the Soviet Union, the number of reconnaissance aircraft assigned for supporting submarine operations declined significantly. Under these conditions the subs often carried out the independent search for convoys. An analogous situation developed in the central part of the Atlantic Ocean beyond the range of aviation. Reconnaissance submarines (two-four units) which were specially assigned instead of aircraft carried out the search and guided the attack groups to the targets. At times the submarines conducted reconnaissance together with aviation. An example could be the anticonvoy operation conducted by German subs from 12 through 18 March 1941 in the area of Greenland--Iceland--the British Isles. The preliminary reconnaissance by aircraft and a submarine significantly facilitated the search and successful attack on the convoy.(12)

From mid-1942, when the German Navy received new submarines with increased combat capability (Series IX) and the number of boats in the operations groups was raised to 20-30 units, a special reconnaissance screen began to be established.(13) This was deployed on the probably convoy route, some 50-100 miles ahead of the attack screen. The intervals between the subs was 30-40 miles. The reconnaissance screen searched for the convoy, determined its composition, course and speed, thereby ensuring success in the course of the operation.

At times, in order to establish the time of departure and the route of enemy ships and vessels, German subs took up advantageous positions in port areas where the Anglo-American convoys were organized. This created the opportunity of organizing further dependable observation of the convoy and the guiding of the main anticonvoy forces to it.

The effective operations of submarines on the Atlantic enemy sealanes was increased to a definite degree by the use of submarines as transports. Thus, in 1941-1943, the subs U-331, U-202 and U-558 each made 9 or 10 long combat cruises.(14) While at sea, they were able to take on fuel and replenish

ammunition delivered to them by supply subs. Due to this, the operating range and the length of time spent away from the bases were significantly increased. During the war years, 14 transport subs were built: 10 for supplying chiefly fuel and 4 for torpedoes.(15)

The rendezvous of combat subs with the supply boats most often occurred in the mid-Atlantic some 300-400 miles to the southwest of the Cape Verde Islands or 300-500 miles to the southeast of Greenland. The rendezvous coordinates each time were determined by the staff of the Submarine Command. A system of corresponding code signals was established for the identifying of the subs.

In the course of the war, depending upon the nature and intensity of the sea shipments, the number and basing system of the submarines, their organizational structure also underwent changes. Thus, in 1942, certain previously operating flotillas were turned into formations ("Submarines West," "Submarines in Norway" and "Submarines in the Mediterranean"). Here the commander of the submarine forces kept command of the submarines operating in the Atlantic while the commanders of the formations which included these boats were concerned with the questions of support for their basing and preparations for combat cruises. From January 1943, the commander-in-chief of the German Navy became simultaneously the commander of the submarine forces. Under his leadership centralized preparation of the new submarines for combat operations and the recruiting of their crews were carried out under his leadership. He provided command of the submarines at combat stations in the Atlantic by radio from the shore command post (BKP). The combat missions were given to the submarine commanders by an operations order which was presented at the base or transmitted by radio after setting to sea. Guidance to the convoys was provided on an evermore centralized basis. But the excessive use of radio in the command of the submarines at times significantly reduced the effectiveness of their operations.

German submarine operations in the Atlantic during the years of World War II confirmed the views according to which interdicting enemy sea shipments should be the main mission of the submarines. Of the 16,699,000 gross tons destroyed by the German Navy, 12,807,000 (76 percent) were due to the submarines.(16) This was the only branch of the German Navy which could systematically and for a long time be employed in very distant areas of the ocean theater (for example, off the coasts of America). In creating an ubiquitous danger, the submarines tied down significant enemy naval and air forces. The combating of submarines in the vast regions of the Atlantic Ocean and the adjacent seas demanded the establishing of strong antisubmarine defenses. This task was the main one for the American and English navies. Thus, in the United States, in 1940-1945, 3,263 ships were built for these purposes, and 1,500 in England.(17)

In generally achieving tangible results in the sinking of enemy vessels, the German submarines were unable to carry out the mission of interdicting the shipments in the theater.

# FOOTNOTES

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2. L. M. Yeremeyev, A. P. Shergin, "Podvodnyye lodki inostrannykh flotov vo vtoroy mirovoy voyne" [Submarines of Foreign Navies in World War II], Moscow, Voenizdat, 1962, p 21.
3. Ibid., p 27.
4. See: V. A. Alafuzov, "Doktriny germanskogo flota" [Doctrines of the German Navy], Moscow, Voenizdat, 1956, p 161; MORSKOY SBORNIK, No 5-6, 1945, p 75; A. P. Rusanovich, N. A. Chkalov, "Boyevyye deystviya podvodnykh lodok v period pervoy i vtoroy mirovykh voyn" [Submarine Operations in the Period of World Wars I and II], Moscow, Izd-vo GSh VMF, 1972, p 43.
5. J. Butler, "Grand Strategy," London, Vol II, 1957, p 84.
6. "Blokada i kontrblokada. Borba na okeanskikh morskikh soobshcheniyakh vo vtoroy mirovoy voyne" [Blockade and Counterblockade. The Fight on Ocean Seanes in World War II], Moscow, Nauka, 1967, p 115; L. M. Yeremeyev, A. P. Sherkin, op. cit., p 79.
7. A. M. Gakkel, A. N. Zamchalov, K. V. Penzin, op cit., p 162.
8. L. M. Yeremeyev, A. P. Shergin, op. cit., p 32.
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10. A. P. Rusanovich, N. A. Chkalov, op. cit., p 55.
11. "Blokada i kontrablokada. Borba...", p 506.
12. See: MORSKOY SBORNIK, No 5, 1957, pp 92-97.

13. A. P. Rusanovich, N. A. Chkalov, op. cit., p 50.
14. J. Rohwer, "Die erfolgreichsten deutschen U-Boots des Zweiten Weltkriegs," MARINE RUNDSCHAU, Vol 3, No 6, 1957, p 253.
15. E. Groner, op. cit., pp 14-23.
16. A. M. Gakkel, A. N. Zamchalov, K. V. Penzin, op. cit., p 173.
17. W. M. James, "The British Navy in the Second World War," London, 1946, p 240.

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